PRACTICAL OBSERVATIONS

ON THE

TREATMENT AND CURE

OF

SEVERAL VARIETIES

OF

PULMONARY CONSUMPTION;

AND ON THE

EFFECTS OF THE VAPOUR OF BOILING TAR

IN THAT DISEASE.

BY SIR ALEXANDER CRICHTON,
M.D.F.R.S.

PHYSICIAN IN ORDINARY TO THEIR IMPERIAL MAJESTIES THE EMPEROR AND DOWAGER EMPRESS OF RUSSIA, AND TO HIS ROYAL HIGHNESS THE DUKE OF CAMBRIDGE, KNIGHT GRAND CROSS OF THE SECOND ORDER OF ST. VLADIMIR, KNIGHT OF THE RED EAGLE OF PRUSSIA OF THE SECOND CLASS, &c.

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1823.

TO

HER IMPERIAL MAJESTY

THE

Dowager Empress of all the Russias.

MADAM,

THE first series of experiments to which the following pages allude, having been made in an hospital which is under the immediate protection of your Imperial Majesty, it must appear natural that I should consider it to be my duty, as it is my ambition, to have the honour of laying this volume at the feet of your Imperial Majesty.

To those who have the happiness of witnessing the daily exertions of your Imperial Majesty in favour of the numerous charitable and benevolent institutions under your Majesty's care and protection, where the sick and the orphan see their Sovereign condescend to come in person, inquire into their situations, and alleviate their sufferings, my dedication of this work must appear still more natural, as it is one which, in my humble opinion, greatly interests humanity.

The great confidence which was placed in me during my long residence at the court of Russia by his Majesty the Emperor, by your Imperial Majesty, and your august Family, emboldens me to seize the first op-

portunity of expressing my deep and lasting sense of gratitude for so distinguished an honour.

That a life so nobly meritorious as that of your Imperial Majesty may be long preserved, is the sincere and ardent prayer of him who has the honour of subscribing himself, with sentiments of the most profound veneration and respect,

Madam,

Your Imperial Majesty's

Most devoted, and most obedient

Humble servant,

THE AUTHOR.

PREFACE.

In the year 1816, while in Russia, I made several experiments with the vapour of boiling tar in cases of consumption; the success I met with, which was witnessed by several of the physicians and surgeons of St. Petersburgh, engaged me to publish an account of these trials in 1817, in a small pamphlet, entitled "*An Account of some Experiments made with the Vapour of Boiling Tar in the Cure of Pulmonary Consumption**." It contained the history of several patients labouring under very decided appearances of the complaint, some of whom were completely cured, others relieved, while others derived no benefit from the tar vapour.

* The same had been published in French at St. Petersburgh in 1816.

These cases, however, were not sufficiently numerous to justify an opinion, at that time, as to the kinds or varieties of the disease which were curable by this treatment; but the persuasion in the minds of all the medical men who saw them was, that the patients who had been subjected to the trials laboured under confirmed consumption, and owed their recovery chiefly to the tar fumigation. The cures were sufficiently striking and encouraging to justify my laying them as soon as possible before the public.

Since that period I have employed the same means in private practice with success, but not in the same degree as in the hospital for the poor in Russia; to explain the causes of which is a principal motive for my again addressing the public on this subject, a subject sufficiently interesting to humanity, not to stand in need of any apology for its being brought forward a second time.

Among the many diseases which medical men

are forced to treat on principles almost entirely empyrical, there are few which exhibit more unsettled views, or a greater contradiction of practice, than pulmonary consumption.

Physicians of equal reputation, and equally extensive experience, have been found at all times, the present day not excepted, whose prescriptions for the consumptive, not only have very little medical analogy with each other, but are in fact evidences of very contradictory indications.

We find some who recommend, at one and the same period of the disease, medicines of the most opposite qualities; and persisting in a daily routine of practice which has constantly disappointed them. But, indeed, this, when seriously reflected on, is not to be wondered at, for the disease is generally considered as inevitably fatal, and where there is no hope it is needless to expect much exertion of thought or talent.

One set of physicians proceed in almost all cases where the pulse is quick, the heat great,

and cough frequent, upon a rigidly anti-phlogistic system, employing blood-letting, the lowest vegetable diet, antimonials, saline purges, and narcotics. Others take the most opposite course, and considering the disease in all its stages and varieties as one of debility, permit animal food, tonics, stimulating expectorants, and opium. Others, and most assuredly the safest practitioners, attack the symptoms according to their urgency and succession.

Sea air, which is now much condemned, was, and, indeed, still is, recommended by many; exercises and particular articles of food have been considered almost as specifics, and if it were worth while to add to the list of incongruities, it would only be necessary to enumerate the chief nostrums which in different ages and countries have been considered as efficacious.

When one reflects how numerous the works are on pulmonary consumption, and that some of them are the productions of men who have justly been deemed ornaments to their pro-

fession; when one reflects how little the art of curing this disorder is advanced, notwithstanding their labours, it certainly must seem like presumption in any one to attempt to draw the attention of medical men to this subject by any new publication. At all events, it is an ungràcious and most discouraging task, inasmuch, as the author has to contend against very settled prejudices.

It is scarcely possible to add any thing of value to the history of the disease, for, since the time of our countryman Bennet, its varieties and their various causes have been fully treated of by many physicians of eminence, both in this and foreign countries.

To write on this subject, therefore, is quite superfluous, except it be in the hope of improving the art of treating the disorder, comprehending under this head, not only the recommendation of new remedies, but also what is of equal importance, the adducing fresh testimony either

in favour of or against medicines which are in daily and general use.

The practical science of medicine may be considered as a vast and ancient edifice, composed of the most heterogeneous materials and irregular design. It is the work of a long succession of architects, master masons and journeymen, who, without much regard for their predecessors, or for each other, have endeavoured to enlarge, strengthen, and ornament the building by additions and cement of their own choosing. The consequence is, that notwithstanding its venerable aspect, it has no pretensions to regularity or harmony, or even to solidity; it is full of weak and imperfect parts. Yet such as it is, it affords shelter to many who seek refuge under its roof, and the curious, the intelligent, and discerning observer may discover in many portions of this extraordinary edifice, the indications of great designs, and many useful hints for future constructions.

Since the time of Galen, very little improvement has taken place in the treatment of consumption by internal means alone.

That pulmonary consumption cannot be cured by medicines which act through the medium of the stomach, the whole history of our art proves to us. Their efficacy in alleviating for a time particular symptoms, such as cough, febrile heat, and colliquative sweat, &c. is not denied. Their assistance, when combined with a judicious and suitable diet, is admitted; but it seems a strange hope, and strange conduct, to pretend to cure an ulcer in the lungs, whether scrophulous, phlegmonous, or of whatever kind it be, by internal remedies alone, while it is acknowledged that ulcers on other parts of the body require a local application, independently of all internal treatment.

Judicious applications to an ulcer, whether arising from a vice in the constitution, or local injury, are equally necessary for its speedy healing. In external ulcers, arising from constitu-

tional causes, such as a scrophulous disposition, no one trusts to internal remedies alone; but in ulcerated lungs, in which, for various reasons, local applications are most necessary, they are almost totally neglected. How incongruous this is, all analogy demonstrates.

If it be asserted that ulcerated lungs are incurable, because no remedies can be kept in contact with them, because the great volume of blood which is constantly circulating through them tends to cherish the sub-inflammation, on which ulceration depends; or, because the ulcer is at all times exposed to the pernicious effects of the common atmosphere, with all its variations of temperature and electricity; it may be answered, that under all these disadvantages, cases well authenticated, of recovery, are on record; and that the medicines which can be brought into immediate contact with the diseased parts are both powerful and numerous; but, that, as yet we are in the infancy of this art. Our knowledge of the volatilized substances capable of being

inhaled, and of doing good in pulmonary complaints, is still very limited. The conditions which ought to guide the choice of those which we are acquainted with, and the restrictions which regard their administration, are far from being settled, merely from the want of accumulated experience.

It is, however, certain, that the partial success which has attended the trial of many aëriform, as well as volatilized substances, which, upon being breathed, have come in contact with the lungs of consumptive patients, has been remarkable, and has animated the discoverers of such means with more than ordinary, perhaps more than reasonable, hope; and has given them the appearance of enthusiasts with the more sober minded part of the profession. The fact, however, is, that almost all the gasses and volatilized substances which have been breathed by consumptive patients, oxigen gas and the nitrous oxide excepted, can boast of more cases of extraordinary cure, than have been effected by any medicine taken

into the stomach; and if these remedies have frequently failed, it is no more than what happens with other medicines in other diseases, and certainly no more than might be expected when they are exhibited for the first time in far advanced and desperate cases where the lungs are nearly wholly disorganised before the remedy is applied.

Those who are unwilling to admit any innovation in medicine, and those who are entirely sceptical, as to the efficacy of medicines in consumption, are equally apt to neglect the only periods of the disease in which the topical remedy, recommended in this work, can do good. But is it fair to condemn it because it fails in such desperate cases to effect a cure? That it is impossible to refuse patients under the worst and most advanced stage of consumption, the consolation of trying a new remedy is acknowledged, but it is not just to find fault with it as generally inefficacious, because it can do little good where perhaps not more than the half, and

more frequently not one third part of the lungs is in a tolerably sound state.

Nor is it fair to attribute failure to a medicine, because it has been most injudiciously employed. The tar vapour, for instance, has been administered in a concentrated state to patients labouring under the most unequivocal symptoms of acute tubercular inflammation, and because it necessarily did harm in such cases, it has in consequence of this misapplication been condemned as generally hurtful to tubercular phthisis.—Some very remarkable instances of this kind have lately appeared in some of the medical journals. An injudicious selection of cases for experiments to be made with any new remedy, is an occurrence which must frequently happen from various causes. But it is to be hoped that further trial will be made of the tar vapour, conducted on principles in better agreement with the reasoning of the following pages.

Until the time of our countryman Bennet, the author of that excellent work the Theatrum

Tabidorum, few attempts had been made to cause consumptive patients to inhale volatilized substances, although the practice was of much older date.

The inhalation of the fumes of arsenic and orpiment is one of the oldest remedies employed as fumigation, and is attributed to Galen.

That these fumes may be breathed with impunity in a very diluted state, every chemist and mineralogist can testify; and although the too long continued action of these, is decidedly deleterious to people in health, it is not yet proved what their effects are on ulcers in the lungs.

It is remarkable that one of the most celebrated of Galen's followers, Rhazes, also praises it, and recommends it to be smoked by consumptive patients in combination with stimulent and resinous substances, such as storax, myrrh, galbanum, and aristolochia root.

Bennet recommended two distinct classes of volatilized substances for inhalation, and he

praises them as being by far the most efficacious remedies in pulmonary consumption. The one consisted of dry vapours which he comprehended under the general title of *suffitus*, the other of watery vapours, which he denominated *halitus*. The first were to be employed in relaxed, the other in dry lungs, and, when united, he assures us that many foul ulcers of the lungs were healed by them.

His watery vapours were made to arise from decoctions of hyssop, rosemary, rose leaves, anise seeds, and liquorice root, sage, the flowers of betony, and fennel seeds. He also recommended some vulneraries of the astringent class. His *suffitus* was formed by the dry vapours extricated by heat alone, from storax, frankincense, boiled turpentine, gum guajacum, mastick, armenian bole, the flowers of the pomegranate, amber, and tragacanth; and lastly, he recommends orpiment added to the foregoing ingredients.

In the days of Willis, if that celebrated physician be accurate in his information, a practice

prevailed among certain empyrics of his day, which, when added to the other facts, is a kind of corroborating testimony in favour of diluted arsenical fumes. He asserts that they took such pieces of carpets as were dyed with orpiment, and having cut them into small pieces, exposed them to heat, and, by means of an inverted funnel, made the patients inhale the vapour.

Of all chemical caustics, the arsenious acid is certainly one of the most powerful, and its deleterious effects when taken into the stomach, depend solely on this quality. It does not destroy the vitality of the body, like many of the vegetable poisons, in a direct and specific manner, but merely on the principle of any other powerful stimulant, that of disorganizing the part with which it comes in contact. But like all medicines of this class, its caustic and stimulating properties may be reduced to the very lowest point, by being diluted either in a liquid or aëriform state; and as it can be inhaled with impunity in this last form, and it appears reason-

able from analogous remedies, that it may change the action of any ulcer to which it is applied, it becomes a kind of reproach to modern physicians not to have tried it, especially as there can be no difficulty in regulating the force of the dose to be inhaled.

Mead recommends inhaling the vapour of myrrh, frankincense, and amber, and complains that such means of cure, in which he places great confidence, are too much neglected by the faculty. Buchoz, in his treatise on consumption, recommends inhaling moist vapours arising from decoctions of emollient and discutient herbs.

Hildebrandt has a most singular conception. He recommends the leaves of tobacco to be sprinkled, with a solution of the acetate of lead, and then to be smoked when dried, by which means, he thinks, the metallic salt will come in contact with the lungs.

Dry fumigations of the lungs are preferred by Billard, in his memoir in the Academy of Sur-

gery, to the wet vapours, for the following reasons: because consumption, according to him, arises from debility of the lungs, because women and delicate people are most prone to it, because the disease is chiefly found in moist and cloudy countries, such as England, Ireland, Holland, &c. and, lastly, because it seldom attacks people of an advanced age. Moist vapours are only to be inhaled in dry asthma, in dry coughs, and in vomica, while forming. The vapour to be inhaled, as recommended by Mons. Billard, has in some respects an analogy with that which I have recommended.

Billard's cure consisted in taking a pound of fresh yellow wax, and the same quantity of common rosin. These were to be melted in a glazed earthen pot, over charcoal, in the middle of the room, while the patient lay in a bed without curtains. In one remarkable case of recovery from phthisis, after the formation and bursting of a large abscess in the lungs, this kind of fumigation was continued fifty days, and fresh ma-

terials were used every seven or eight days. In the beginning, Billard substituted turpentine for the rosin, and he thinks the virtues of the mixture were improved by the addition of a little Peruvian and Canadian balsam. The mass was heated four or five times daily, and when the air of the apartment seemed sufficiently heated, the charcoal was removed. Billard considered the wax as the chief remedy.

These remedies have all been forgotten, or have fallen into discredit, as well as the inhalation of æther, of hydrogen gas, and the moisture and effluvia from cows, &c. Nor, indeed, can it be reasonably expected that it should be otherwise, for of the many who die of consumption, few present themselves to the physicians until the lungs are already studded with tubercles, many clusters of which are in a state of ulceration, and the minutiæ and details which are necessary to be attended to in preparing and exhibiting aëriform or volatilized medicines, can

not be expected of a physician who scarcely allows more than a few minutes to each patient.

There is, indeed, no hope that our experience of medicines, which are capable of being breathed, shall be either sufficiently multiplied or sufficiently varied, but in establishments for the poor. These ought to be created in various parts of this and other countries, so as to enable medical men to see what difference of effects arises from a similar practice in different climates.

The facts in favour of such trials are sufficiently numerous to justify the attempt, and the following work derives its chief merit from adding a few more to the list, and pointing out a vapour procurable, at all times, at little expense, which can be breathed for days, nay for weeks together, with perfect ease, if previously prepared for that purpose, and which has effected some very remarkable cures in cases of confirmed phthisis.

I have endeavoured to point out the varieties

of consumption, and the periods in which the tar vapour has done most good, as well as the cases in which it is hurtful or inefficacious; but in order to do so, I have been obliged to class consumption, as other authors have done, according to their causes. I have endeavoured to avoid swelling this work to an unnecessary size, by not dwelling on the history or doctrines of the disease, supposing the reader acquainted with the chief authorities on the subject.

In treating on the internal management of phthisis, I have endeavoured to point out, as much as possible, the circumstances of the disease in regard to cause, period, and constitution, which require the application of particular remedies. And here it will, perhaps, be said, that I have been unnecessarily minute; but need it be repeated that this part of medical practice is in a very unsettled and imperfect state, and demands such details. I therefore hope for indulgence in delivering my sentiments upon it, and in offering a few formulæ for the use of the younger part of

the profession. These I have added as a second appendix to the work, and have taken the opportunity of alluding to various remedies which have been much recommended for the cure of the consumptive, but of which I have not had sufficient experience to enable me to decide concerning their virtues. The experience of every day proves that much improvement may be made in this very unsatisfactory department of the medical profession, and that the efforts of nature may be greatly assisted by internal remedies.

In conversing with some of my old medical friends and acquaintance in this country concerning the success which the vapour of boiling tar had produced, I have been informed, to my regret, that it has generally failed.

On the other hand, I have had the satisfaction of seeing an account of trials made with this remedy in the great hospital for the poor at Berlin called the Charité, under the immediate inspection of the king's first physician, Dr. Hufeland, and that of the first physician to the hospital,

Dr. Neümann, in which the results were nearly as favourable as in the hospital for the poor at St. Petersburgh.

The number of cures of persons decidedly consumptive, was as one to twelve; and of those so much relieved, as to be allowed to leave the hospital at their own desire, as one to five.

Quite satisfied of the veracity of my old and much respected friend, Hufeland, and of his coadjutor, Neümann, I could not fail to be at first much surprised at the account of general failure in England, compared with trials made in much ruder and colder climates, and which are commonly deemed more injurious to delicate and infirm constitutions than the one we live in. Supposing this last opinion to be true, which unfortunately it is not, a very little reflection soon showed me the great advantage which the consumptive patients in cold climates have over the inhabitants of this country, who labour under the same malady; and also why patients in hospitals, and public charities, in cold climates, have ad

vantages which cannot easily be obtained in private practice.

The result of the first series of trials made with the vapour of heated or boiling tar in the Charité at Berlin has been published in the first part of Hufeland's Journal for the year 1820. Several of the cases I have translated, and added as an appendix.

It may, perhaps, be thought by some, that in the small pamphlet in which I gave an account of the first trials made with the vapour of boiling tar, I was not sufficiently explicit as to the cases in which this new remedy was applicable, with either safety or utility to the patients, and that, in the present work, I have probably erred on the other side by too much minuteness of detail. But to the candid and well-informed, I need make no apologies for this. It was not to be presumed that the results of a very few cases should enable me to foresee the chief circumstances which either limited or directed the application of the remedy; and my astonishment on

perusing an account of some late trials made with it, in which I should have thought that the natural intelligence of a practical physician ought to have rendered him cautious, and, at all events, not to have persisted with a medicine which was evidently doing harm, has forced me to be a little more minute at present than I should otherwise have been.

There is but one word more I am desirous of adding on this subject, which is, that the vapour of boiling tar, as well as all remedies which do good by being applied directly to the lungs, let their powers be what they may, are to be considered only as auxiliaries to the general treatment which the varieties of the disorder, and the various constitutions of individuals, require.

If, out of the great number who die annually of consumption in Great Britain, making rather more than one-fourth of its general mortality, one life only in twenty can be saved by the means here proposed, it will, I trust, shield me from all false criticism on the score of presump-

tion, or too sanguine an imagination. The experience I have had in this disease, and the trials made at Berlin, give hope of still greater success than this; and I should, therefore, deem myself unworthy of the character I have maintained, in a long course of practice, if, fully convinced that much good may be effected in many cases, I should hesitate to propose the means, from an apprehension of the opposition or scepticism which new remedies usually encounter, or from discouragement arising out of obstacles which were not foreseen.

The following pages having been written with this view, and also with that of showing how important it is in practice to vary the internal treatment according to the leading features of each variety of consumption, it will not, I hope, be thought extraordinary, if I have omitted to mention many treatises on this complaint, which are excellent in themselves, but have no direct reference to the points of discussion.

It may, probably, be thought, that I have at-

tributed too much influence to the tar vapour in many instances, especially as I have not trusted to it alone, but have at the same time employed medicines of various degrees of power, together with a well regulated temperature; but to this it may be answered, that the same benefit has never been attained by these means alone, as when combined with the tar vapour. All the cases enumerated in the first publication, as well as those published by Drs. Hufeland and Neümann, prove this fact.

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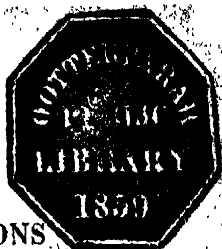
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PRACTICAL OBSERVATIONS

ON THE CURE OF

PULMONARY CONSUMPTION, &c.

CHAPTER I.

Appeal to professional men concerning the possibility of curing some of the worst varieties of consumption: proofs from Laennec's Dissections; proofs from experience; of the great assistance to be derived from the vapour of boiling tar in tubercular and ulcerated lungs. Its supposed mode of action; causes of its failure in Great Britain; temperature; preparation; misapplication. Cases of successful application of the tar vapours since 1816. General view of the cases in which it may be usefully employed.

To medical men who daily witness the mental pain of the parents of consumptive families, who, after having lost one or two of their children by the disease, lead a life of unceasing anxiety and dread concerning the rest of their progeny, and are thrown into a state of terror by the slightest cough occurring to them,

no apology ought to be deemed necessary for endeavouring to draw their attention, repeatedly, to that part of the healing art which relates to the prevention, and cure of pulmonary consumption.

Yet so strong, and so general, is the prejudice among medical men, that real pulmonary consumption is totally incurable, and that the cases of supposed recovery have been all problematic and doubtful, that I feel myself called on to make a formal appeal to those who think thus, and to request, at least, a patient hearing from them, in bringing forward such facts and arguments as are necessary to the forming a more impartial and correct opinion on the subject.

To flatter myself with the hope of producing entire conviction on the mind of some, is, I am well aware, a vain expectation; but I cannot resist the suggestion, that I may succeed better with others: and, at all events, I am convinced that discussion concerning one of the most important points of medical practice cannot fail of being beneficial to the interests of a very numerous class of unfortunate, and interesting sufferers.

Tubercular consumption, is of all the varieties, the most common in this and all northern coun-

tries, and assuredly the most generally fatal. That it is deemed incurable by the greater part of medical men will not, I presume, be denied. The expressing any doubt, indeed, on this point, is sufficient, with many of my learned brethren, to affect the character of him who does not assent to the proposition; and yet one of the great objects of my writing on phthisis is to prove that tubercular consumption is curable under a variety of circumstances.

Success in practice may be always attacked not only by unfair explanations, but on the principle of *ex parte* evidence; but anatomical observations, founded on the minute and careful inspection of diseased organs, are not so easily set aside. It is with singular satisfaction, therefore, that I adduce the testimony of one whose opportunities of making such observations have been much more numerous than commonly falls to the lot of any physician, and whose knowledge of the human body in health and disease renders him a competent judge in all such cases: I mean Mr. Laennec, whose work on the Diseases of the Chest, if not in the hands of every medical man, certainly deserves to be so.

After describing a kind of semicartilaginous membrane, and other appearances in the cavities

where he supposed tubercles to have existed, he goes on thus:

"I had often observed the above state of things without knowing to what to attribute it, and without attaching much importance to the appearance; but, after I was convinced of the possibility of cure in the case of ulcerations of the lungs, I began to fancy that nature might have more ways than one of accomplishing this end; and that, in certain cases, the excavations, after the discharge of their contents by expectoration or absotption, might cicatrize in the same manner as solutions of continuity in other organs, without the previous formation of the demi-cartilaginous membrane."

"In consequence of this idea, I examined these productions more closely, and came to the conclusion, that, in every case, they might be considered as cicatrices; and that, in many cases, they could hardly be conceived to be any thing else."—*See page 23d of Forbes' Translation.*

After more detailed observations on the diseased appearances, he adds, p. 25:

"This fact seems to me to leave no doubt of the nature of these productions, and of the *possibility of cicatrization in ulcers of the lungs.* It further proves, that a bronchial tube may tra-

verse a tubercle, and afterwards a tuberculous excavation, without being destroyed," &c. Mr. Laennec, in a subsequent part of his work, details the cases of people whose lungs, on inspection, afforded remarkable instances of pulmonary cicatrices; and, after a minute description of such appearances, he concludes with the following decided opinion.

"The foregoing observations prove, I think, that tubercles in the lungs are not, in every case, a necessary and inevitable cause of death, and that a cure may take place in two different ways, after the formation of an ulcerous excavation: *first*, by the cavity becoming invested by a new membrane; and, *secondly*, by the obliteration of the excavation, by means of a cicatrix, more or less complete, consisting of cellular, fibrous, or cartilaginous substance," p. 28.

The hope which I, in common with a few others, have of late years held out of the curability of consumption, arose entirely from experience, especially from the efficacy of tar vapour and temperature; but it must, I presume, be as satisfactory to every enlightened and able physician as to myself, to find that Mr. Laennec adopts the same opinion, from a minute inspection of lungs which were long diseased, and

from the dissection of many, who he supposes to have had ulcerated lungs, and afterwards recovered and died of other diseases. He says, page 33, "These considerations ought to induce us to entertain some hope in these cases of consumption, wherein we have reason to believe the greater portion of the lungs remains still permeable to the air. Although we are, therefore, certain that a subject that is pectoriloquous has an ulcerated cavity in the lungs, we are not, on this account, equally certain that this will prove fatal. We may even be justified in believing that a case wherein all the ordinary symptoms of consumption exist, together with pectoriloquism *, is more favorable than one in which they exist without this peculiar phenomenon (symptom); since, in the first case, we may attribute the symptoms to the efforts of nature, in maturing and evacuating the tuberculous matter, and may hope for their cessation when this is effected, provided the greater portion of the *lungs is in other respects healthy* (as we can ascertain by the stethoscope), while, in the second case, we must imagine that the tubercles

* *Pectoriloquism*, a term invented by Laennec, to denote a peculiar sound of voice issuing from a preternatural cavity in the lungs, and detected by the instrument called stethoscope.

are very numerous, since they produce such violent general effects previous to the period of their softening, and that therefore they will, in all probability, occasion death before the epoch of possible cure arrives."

If I have presumed, in this work, to state that the vapour of tar has not had a fair trial in this country, I beg it to be understood only as far as my knowledge of the facts go. No fair trial of its virtues can be made indeed in this country, in any of its establishments or houses, as at present constructed; a circumstance, of the importance of which I was not fully aware, when I published an account of the first trials made with this remedy; for having been accustomed, during a residence of sixteen years in Russia, to the uniform temperature of the houses and hospitals of that country, I was not sufficiently aware how much this circumstance favored the operation of all other means employed for the recovery of the consumptive.

That temperature alone, however, is incapable of effecting a cure when the disease is fairly established, the cases which I published in 1816 ought to prove; for the patients had all the advantages of uniform temperature, and were

getting daily worse, until they were made to breathe an air charged with the vapour of heated tar. Before proceeding further, however, it may be remarked, that the vapour of boiling tar has been asserted to have succeeded beyond all expectation in the south of England. A foreign physician, who resided at Portsea, Dr. Lazzaretto, has published the relation of several cases of consumption and obstinate cough which were cured by it.

With great reason might I complain of the extraordinary want of candor on the part of Dr. Lazzaretto, whose pamphlet appeared a year after mine was published in England. In no case whatever, as far as my reading went at the time I wrote, did this remedy appear to have been tried in any case of confirmed consumption until I employed it; but as Mr. Mudge, in his little treatise on the inhalation of steam, had stated that a case had been communicated to him of a recovery from phthisis, by means of the vapour of common resin, and that this, from a supposed analogy with tar, led him to offer a *conjecture* that much of the benefit derived from sea voyages, might, perhaps, arise from the *effluvia* of this substance, I thought it but fair to

allow him the merit of having hinted at its possible efficacy*. But Dr. Lazzaretto assumes the whole merit to himself; he does not condescend either to notice my pamphlet, or mention my name. He states that the discovery was owing to chance, and that if he said more about it, he might appear to be attributing too much merit to himself; the passage is as follows: "The remedy which it is the object of these pages to recommend was noticed by accident (and chance and popular observation have given birth to most useful medicines); but what was discovered without design, has been applied to a most salutary purpose. I might speak much in its praise, but I should suspect myself of partiality for *my own* practice, as the public most assuredly would do," &c. &c. See *Practical Hints, &c. by Emanuel Lazzaretto, p. 4, of the preface, Portsea,* 1818. Such a total want of candor as this exhibits, cannot tend to raise the name of Dr. L. in a country where liberality, and a strict sense of justice and propriety, are expected from every man in an honored and honorable profession.

Various errors and misrepresentations con-

* Mr. Mudge's conjecture appears to have arisen from reflecting on the case communicated to him.

cerning the manner of employing the tar vapour have been propagated both publicly and privately. If some of these have been implicitly followed, instead of the one I recommended, it explains in a sufficient manner the cause of many failures. One of the most remarkable is to be found where I certainly did not expect to meet with any thing of the kind—I mean in the Journal of Science and the Arts (No. 10, page 380), edited at the Royal Institution of Great Britain.

The editor says, it is recommended to mix with each pound of tar half an ounce of cream of tartar. He also says, the vapour is to be *inhaled* for several hours. The editor of the Journal is too good a chemist to suppose that cream of tartar can prevent the disengagement of pyroligneous acid, which now and then adheres more or less to tar, and which I proposed to arrest by the subcarbonate of potash. In my pamphlet, I recommended the addition of this last-mentioned substance for that purpose. The recommendation to *inhale* the vapour was also a most injudicious advice, and has led to serious mischief. The tar vapour is injurious to the lungs in a hot and concentrated state; independently of which, the effort of inhalation is always hurtful to ulcerated lungs. My name is not mentioned by the editor of the

Journal as connected with the medicine; for which, in the present instance, I am really thankful, as it absolves me, I hope, from the charge of having advised so hurtful a mode of applying the remedy.

It is, I know, the general opinion of medical men, that when the lungs are ulcerated, there can be no hope of recovery; and it is asserted, that the cases of complete cure must all of them have been those in which the mucous membrane lining the bronchiæ and air cells of the lungs were alone in a diseased, but not an ulcerated state. This is the Phthisis Pituitosa of the German physicians, and is the only variety of the disease which by many is believed curable by the vapour of boiling tar. That it is curable in many instances by this remedy I am convinced; and in the excellent work of Dr. Hastings on Bronchitis some cases of cure effected by the vapour of tar are also mentioned: but this is not the only variety of consumption which is curable by this means.

As the cases which terminated in a complete recovery both in St. Petersburg and Berlin were considered to be hopeless until vapour of heated tar was exhibited; as they were all getting worse under every mode of treatment until confined in apartments impregnated with this vapour; as

some of the patients had every external mark of a scrophulous constitution; and as several of these patients had every symptom of tubercular phthisis, it might appear to many to be quite superfluous to dispute about the real nature of the cases in which it produced such remarkable good, evidence in medicine being always dubious: but as the results of these trials show, that suspected cases of consumption, which had resisted every other treatment, have yielded to this remedy, they give proof, at least, of considerable efficacy, and afford great encouragement for proceeding with further trials.

Where the substance of the lungs is much disorganised by the presence of a great number of tubercles, either dormant, or in a state of progression, no physician in his senses, I believe, would flatter himself with the hope of doing any other good, in the plurality of such cases, than the mitigating the symptoms, and keeping off death as long as possible. But is there a physician of experience and reputation who could, until very lately, take it on himself decidedly to say to what extent the disorganisation of the lungs had proceeded, in by far the greater number of cases of consumption on which he has been consulted?

Experience has proved that persons may live long after a great loss of the substance of their lungs. Dr. Thomas asserts that they can live with only one-twentieth part remaining. Neglected inflammation of the lungs has frequently given birth to large abscesses in those organs, forming bags of purulent matter in them, and destroying a considerable portion of their substance. When these burst without suffocating the patient, they generally bring on rapid consumption in scrophulous habits. One of the cases of complete cure by the tar vapour was of this kind, and where the patient was nearly in the last stage of the disorder. In many of the cases of recovery related in Hufeland's Journal, the scrophulous character of the patient is pointed out by the most unequivocal testimony.

I am quite aware that nature, with judicious treatment, now and then succeed in curing such cases; but the patient, alluded to above, was entirely without hope of cure when he began the trial of the tar vapour. All that I wish to infer, however, from the case is, that the destruction of a considerable portion of lungs by tubercles, or ulcer, or both, does not of necessity, in every case, take away the hope of recovery, and this fact is now proved by repeated dissections, of

which Mr. Laennec's work brings forward various proof.

The vapour of boiling tar seems to act in different ways on tubercular and ulcerated lungs; first, as a stimulus both to the arterial and absorbent system of the diseased parts, *hastening the softening or resolution of tubercles* and the generation of new matter; the remedy coming into immediate contact with the diseased parts: and secondly, by diminishing the quantity of oxygen in any given mass of air, not by any chemical union with it, although this remains to be proved, but, as I suspect, merely by diluting the atmospheric air with a vapour which contains little or no oxygen, and is almost entirely composed of carbon and hydrogen, and thereby lessening the quantity of that aeriform fluid which seems to augment the suppurative process of all sores.

If any benefit is to be expected from medicine in the cure of consumption, it is surely to be expected with more hope of success from those remedies which can be breathed with perfect ease and brought into contact with the diseased parts, than from medicines which operate only through the medium of the blood; or by sympathy with the stomach. This suggestion, also, ought to

encourage the multiplying and varying the trials of such remedies, which is the chief object of my addressing the medical public on this subject. It must however be remarked, that it will require long and repeated experience, to ascertain what are all the varieties and stages of consumption which can be relieved by them or by any medicine whatever. The success of the tar vapour has been in some cases quite remarkable, while in others, which were apparently similar, it did no good, and in some cases it evidently provoked hæmoptoe. In almost all cases where the tar has been duly prepared, its first effects in relieving the dyspnœa, cough, and pains in the chest, and in diminishing the expectoration, have been remarkable. These effects, on such patients, as from the state of the lungs were curable, were soon followed by a progressive and general amendment until a complete cure was produced. But others, who at first were much benefited by the application, began some time after to struggle as it were between the good effects of the medicine, and the destructive process of the disease, and from the number and volume of the tubercles, they at last resisted its action altogether.

In my first publication on the efficacy of this

medicine I stated, that it ought not to be employed by persons subject to hæmoptoe. This was the only precaution which the limited trials I had then made of it seemed to justify; yet in No. 62 of the Edinburgh Medical and Surgical Journal, I find a case of Phthisis Pulmonalis mentioned, which began with hæmoptysis and terminated fatally, by an excess of that hæmorrhage in which the tar vapour was tried. It may be asked, if this was fair, either to the patient or the medicine, after what had been stated?

Several practitioners in London have confessed to me that they have employed it in similar cases of consumption. The fact is, they had not read the pamphlet, but hearing the remedy spoken of as a new one, they made use of it as almost every new remedy is, without due information, caution, or discrimination.

It is not the presence of tubercles in the lungs, except they be in great number indeed, which produces death in the greater number of those who are said to labour under scrophulous consumption. Life may be long sustained by a very small portion of lungs; and provided the portions of lungs surrounding the tubercular depositions continue free from either accidental active in-

flammation, or from the slow, but destructive progress of scrophulous disorganization, no other symptom of decay takes place than general weakness, emaciation, and more or less dyspnœa, according to the quantity of lungs rendered useless.

In regard to prognosis, it may be said, that where symptoms of tubercles are present, no hope need ever be entertained while the general emaciation and weakness are proceeding; no matter whether the patient be troubled with cough and expectoration or not; but this state of things may cease, and has frequently ceased. It must, I think, have occurred to other physicians, as well as to myself, to have seen the disease arrested either by some natural and happy change in the constitution of the patient, unaided by any other medicine than regimen and change of climate, or by a fortunate action of medicine on the individual; of such cases, some have remained improving a little for many years, but have ultimately died consumptive; while a few others have recovered entirely.

There are indeed instances of patients living several years by strict attention to diet, and to the guarding against great changes of temperature, or the inhalation of chemical or me-

chanical stimuli, even when tubercular phthisis had been fully established. Nay, I am inclined to think, from one or two cases which have fallen under my observation, that tubercles, when not numerous, may be altogether absorbed, and the patient be thus restored to as perfect health as any scrophulous person commonly enjoys.

This opinion is strengthened by that of Dr. Thomas Young, who, in alluding to his own case, says, "In fact, notwithstanding Mr. Bayle's observations, I cannot help being persuaded that in my own case there was an incipient formation of tubercles, the difficulty of breathing and hectic symptoms which I experienced not being intelligible on any other supposition, since there was for a considerable time neither cough nor expectoration; and that these tubercles must have disappeared at a subsequent period is completely demonstrated by the restoration of the capacity of the chest to the extent of containing seven or eight quarts of air."—*See Young's Practical and Historical Treatise on Consumptive Diseases*, p. 53.

The vapour of tar, long continued but of moderate force, and an uniformly equal temperature, have seemed to me to produce this happy change; and hence, in cases of dry con-

sumption, as it is called, that is, where the lungs are gradually destroyed by the formation of tubercles without suppuration, this remedy may also be tried, though with this caution, for fear of hemorrhage, that the air of the apartment be charged with a due degree of humidity as well as of the vapour of tar. Some of the most remarkable cures performed by the tar vapour, both in St. Petersburg and Berlin, were in patients who had every symptom of a scrophulous habit; but this does not prove that they had tubercular phthisis; for such patients, like other people, are subject to active inflammation of the lungs, and with them it terminates very readily in suppuration, giving birth to common purulent phthisis. The labouring poor, who, from their necessities and the habit of suffering, seldom apply for relief till they can bear their malady no longer, are frequently attacked with this variety of consumption. Abscesses are often formed in the lungs of such people before they are aware of it, for in general patients of the description alluded to have not much nervous feeling. In all such cases the tar vapour and equal temperature do good, and have cured several. One of the most remarkable cases of this kind is that of

Alexander Minaeff, related in my former publication on the tar vapour.

The most destructive variety of consumption, and one of the most frequent, is that arising from the rapid succession of inflammation and suppuration of many clusters of tubercles. It is distinguished by the frequency of the cough, a rapid decay of strength, pains in the chest, and a constantly quick pulse, which is generally wiry and hard until the weakness becomes general.

To the well informed part of the medical profession it would be superfluous to attempt a picture of the morbid appearances of the lungs in the various stages of this disease, after what has been already written on the subject by Messieurs Bayle and Laennec. But, in a practical point of view, all that is necessary to state is that as long as a quick and rather hard pulse accompanies the other usual symptoms of tubercular phthisis, it may be relied on that a scrophulous inflammation of an extensive and disorganizing kind is rapidly going forward, and in such cases the vapour of tar, although it now and then relieves the frequency of the cough, produces only a temporary amendment, but cannot cure the disease until the scrophulous action is arrested, which

in such cases is almost hopeless in the greater number of similar cases.

It may also be remarked, that as by far the greater number of consumptive cases which occur in Great Britain are of this acute and destructive kind, the vapour of tar, should it have been solely trusted to, must have failed; for such cases, even where a little hope is to be entertained, demand the co-operation of internal remedies: and if we consider the nature of our climate, the construction of our hospitals and houses, there is little reason for wonder at the failure.

The quick and hard pulse, and strongly marked hectic fever, which accompany all the varieties of pulmonary consumption, arising from extensive tubercular inflammation, are infinitely less frequent among the poorer inhabitants of Russia than of Great Britain or France, where this variety of consumption is so frequent. Whether this arises from the constant warmth in which the Russian lives, the frequent use of his vapour bath, or from the poverty of his diet, I do not pretend to say, but the fact is so; and to this difference of constitution, and other adventitious circumstances to be mentioned hereafter, the greater success in curing this class of patients may, perhaps, be owing.

The facts which follow this chapter concerning climate and temperature, appear to demonstrate, that even in the most scrophulous constitutions the formation of tubercles in the lungs may be avoided, and the circumstance is well worth the serious consideration not only of physicians, but of all consumptive families.

What renders the cure of tubercular consumption peculiarly difficult, and indeed almost hopeless, is, that the vapour of tar, or any remedy, whatever, which does good in the softening and suppurative state of the tubercles, is apt to do harm in their inflammatory state. It frequently happens, that in the same patient, some tubercles grow soft, and discharge their contents by slow steps. All such cases are cureable, except the scrophulous constitution be very powerful. The vapour of tar hastens the resolution of the tubercles in such cases in an evident manner. Even in cases of tubercular phthisis, accompanied by a constantly quick pulse, and hectic fever, which I consider the most incurable cases, it has effected a cure, for if ever there was a case of real tubercular phthisis far advanced, it was that of A., which is the first mentioned in my former pamphlet.

To suppose that any one remedy, or any one

method of treatment, can cure all cases of consumption, or even bring the same relief in every one, is to expect an uniformity of success, which, alas! is never met with in any other disease whatever, even the most simple and tractable, so much does a difference in organisation or individual constitution, in the powers of life and in the state and period of a disease, independently of climate and mode of life, &c. vary the effects of every remedy.

Consumption may be complicated with a hemorrhagic, scrophulous, scorbutic, irritable, phlegmatic, bilious, or inflammatory diathesis, all of which require different modifications of treatment. To suppose, therefore, that the vapour of boiling tar, or any remedy, can be uniformly successful, is to expect an impossibility; but that it is capable of curing several who would inevitably die without it, and that it affords relief in a great number of cases; that it prolongs life beyond all expectation, founded on the general experience of the disease, and the influence of other remedies; and that it is a safe and excellent auxiliary, well worth new and numerous trials, is all I contend for.

Dr. Neuman, physician in chief of the Charité

at Berlin, assured me he had succeeded in completely curing, by means of the tar vapour, a variety of phthisis, which, it will be acknowledged, has never been known to yield to any remedy yet discovered—I mean the phthisis laryngeal, or that common consumption which arises from the ulceration of the cartilages of the larynx. This dreadful malady is easily known by the hoarse sound of the voice, by the pain in swallowing, extending to the throat and ears; and by the noise resembling croup, on pressing the larynx gently between the finger and thumb, which may be considered as a pathognomonic symptom of the disorder.

During a stay of two months at Berlin, the autumn before last, Dr. Neuman showed me a case of this disorder which was gradually recovering by means of the tar vapour. It was the second of the kind which he had subjected to this treatment.

Independently of the two varieties of phthisis already mentioned, which have been cured by the vapour of hot or boiling tar, there is another, derived from chronic inflammation of the mucous membrane of the bronchiæ, in which the tar vapour has been equally successful.

There is no absolute criterion which I know of by which some cases of this disease, when far advanced, can be distinguished from phthisis arising from ulcerated lungs; for in consumption arising from bronchitis chronica, the matter expectorated has every apparent quality of pus. It is of a whitish yellow colour, and loose in the adhesion of its particles, when compared with ordinary mucus. It is in fact exactly like the purulent kind of fluid discharged from the fistula lachrymalis, or from the mucous membrane of the urethra or vagina in inflammation, and is often extremely abundant. The emaciation, the night sweats, colliquative diarrhœa, are all brought on as rapidly by this variety of phthisis as by that arising from hæmoptoe or tubercles, but the pulse is seldom so quick; it is never hard, and the disease is not accompanied by a fixed pain in any part of the chest. The hectic fever also is less severe than in any of the other varieties, except in the last stages. The origin, therefore, and first symptoms of the cough, are the only circumstances by which a rational conjecture is to be formed as to the real nature of the disorder: but I shall treat of this variety afterwards.

"When chronic bronchitis," says Dr. Hastings in his excellent book on Inflammation of the Mucous Membrane of the Lungs, "has existed so long as to cause emaciation and very copious pus-like expectoration, there is little or no hope." P. 272. Such cases, however, are generally curable by the vapour of tar, provided the patient be not exposed to frequent changes of temperature; for in this variety the breathing of cold air is, perhaps, more prejudicial than in any other, phthisis laryngea excepted.

The reason why the vapour of tar has not hitherto done so much good in Great Britain as there was reason to hope, arises chiefly from the climate and the difficulty of sufficiently charging any English apartment with the tar vapour. That an uniformity of temperature greatly assists the recovery, is an oponion founded on multiplied experience. The cures performed in Russia were certainly much facilitated by the easy command of temperature. The patients in the Charité at Berlin also were in warm wards, where they were never exposed to any sudden change of temperature or currents of cold air.

Many medical men in this country have been satisfied with recommending a trial of the tar vapour, without entering into such details as are

necessary to enable the patient to derive any benefit from it. The general persuasion too, that all such cases are hopeless, withdraws the minds of practitioners from that active research after every aid which can contribute to the cure.

The inhalation of the vapour from a gazometer or bag is injurious, not only because the vapour in that case is generally too strong, but because every trial made in this way produces serious injury to diseased lungs by the efforts which the patient makes to inhale from such receptacles; for, in such trials, the air-cells are too much distended in each act of inspiration.

Whatever the volatized substances be which are introduced into the lungs of consumptive patients, it is an object of great importance to charge a whole chamber at once with them, so that the person may breathe the air of that apartment without any greater effort of respiration than in the usual mode of breathing. Indeed, I may make an observation here, which is founded on experience, that the less air a consumptive patient takes into his lungs at once the better; he ought to live with as little air as possible, and, consequently, with as little motion of his lungs as possible. Unfortunately this is not always in his power to regulate, as the quickness

and mode of his respiration depend greatly on the circulation, and is therefore not under his command. It is on this account that all remedies which diminish the irritability of the heart and arterial system, and which produce a certain torpor in the lungs, through the influence of the brain, are often usefully employed in consumption, provided they are not employed out of season, or at too great an expense of the vitality of the patient. Hence hydrocyanic acid, certain preparations of opium, hyosciamus digitalis, and cicuta, do much good in many cases, though only for a limited time. The tepid bath, minute doses of emetic tartar, sometimes with, at other times without, minute doses of quicksilver in its lowest state of oxidation; the muriate of lime alone, or in combination with narcotics, although acting on different principles, yet as their action terminates in taking off inflammation, are also of great assistance, and may be judiciously employed in some periods of the disease; attention being paid to the constitution of the individual.

The places where the good effects of the tar vapour may be observed with most ease and advantage are the pitch-houses of great cable manufactories, where large quantities of tar are boiled, which completely impregnate the neigh-

bouring warehouses or places through which the cables pass, to be rolled up, after having been imbibed with the boiling tar.

But I must observe here, that it is not in the chamber where the tar is boiled, but at a considerable distance from it in the building, however, that a consumptive patient can breathe the air with safety. The plan and distribution of the various parts of the manufactory can alone determine this. The object is to find a place where the atmosphere is highly charged with the vapour of tar alone, the pyroligneous acid having been dissipated before the vapour reaches the spot alluded to. This acid has a very sensible effect on the eyes, and this circumstance is a good practical criterion for judging of its presence. The common tests for discovering the presence of an acid are no tests whatever in this case, because they are quickly reddened by the carbonic acid gas, which abounds in such manufactories, and which does no harm.

A more striking instance of the good effects of such a mass of air, highly impregnated with the vapour, need not be related than the first case in which I tried it, an account of which is contained in my first pamphlet on the tar vapour. A very warm summer, however, contributed to

this recovery. In such pitch-houses the patients may remain, if the weather permits, as long as they can bear it, that is, until giddiness or violent head-ache force them to retire; and, if they are fortunately in the vincinity of such establishments, they can repeat their visit several times a day. The success of the cure depends very much on the impregnation of the air with the finer and more permanently volatile parts of the tar, an advantage which it is scarcely possible to procure by the boiling of small quantities of tar over a lamp or charcoal furnace in the apartments of the sick, except this be done with great skill, attention, and patience. But, if the sending consumptive patients twice or thrice a day to some manufactory where tar is boiled in great quantities be advantageous, it is only so in mild weather; for the pernicious effects of a cold or windy day, to which the patient must occasionally be exposed who seeks the remedy out of his dwelling, will do more injury than can be counterbalanced by the pitch-house; and this forms another reason why establishments ought to be erected in various parts of Great Britain for this unfortunate class of sufferers, provided the trials which are first made in this manner afford a prospect of their utility; and it may be

added, that if ever there was an interesting, useful, and praiseworthy object of experiment and of humanity, it would be the establishing houses for such trials in this country, where so much domestic misery arises from the prevalence of the disease.

I would therefore strongly recommend the foundation of hospitals in different parts of Great Britain, not solely for this purpose, but for multiplying the trials of every means and medicine which might contribute to the cure or relief of this disorder; and there is this great encouragement to be offered, as a motive for such an undertaking, that the disease is not so decidedly and invariably fatal as to deprive the physician of rational hope of making useful discoveries in practice.

To show, however, that a large or expensive establishment is not always necessary, I need only mention two of the last cures which were effected by the tar vapour before I left Russia: the one was an Englishwoman, the wife of a rope-maker, living in the vicinity of Petersburg, of the name of Colson. She had no external appearance of having any hereditary right to consumption. She had evidently been a strong made healthy woman, of a full habit of body

and florid complexion: she was about thirty-eight years of age. Her disease was the consequence of neglected pneumonia, which had terminated in a large abscess of the lungs, presumed to have been extensive, from the very great quantity of purulent matter she expectorated. She had been under the care of a physician and surgeon of reputation. It was in the summer of 1817 that I first saw her. The disease had made a very rapid progress, as is usual in this variety of consumption. She coughed frequently, expectorating great quantities of purulent matter; her pulse was about 120. She was labouring under hectic fever, her strength rapidly declining, and she was greatly emaciated; she had colliquative sweat every night, and at times had attacks of spontaneous diarrhœa; her breathing was short and quick, she had stitches in her side, but these were only troublesome after much coughing.

I instructed her husband how to charge the apartment where she lived with the tar vapour, and I ordered her a decoction of althæa root, with extract of white poppy every hour, to alleviate the frequency of the cough; I also desired her to make boiled milk and rice, and bread and milk, her chief diet. In about eight days after

I had seen her, her husband came to inform me that the cough, expectoration, and all the other bad symptoms, had greatly diminished. He said that the tar he employed was that obtained from the roots of the white pine, which he thought had more effect than the tar from the birch bark, which is commonly used in Russia. At the end of three weeks, the cough had entirely left her, she was daily getting better, and required no change of medicine. About this period I was obliged to accompany the imperial family to Moscow, where I remained the whole winter. On my return to St. Petersburg, I found that Mrs. Colson had remained perfectly free from her pulmonary complaint, but had been seized with palsy on one side. She had all the cares and fatigues of a numerous family, and from the *res angusta domi* was subject to great anxiety of mind. She afterwards had an attack of apoplexy, which terminated her sufferings.

In this case the tar fumigation was made by keeping about a quart of tar in a state of slow ebullition over a spirit lamp in the corner of the room.

The next case I have to relate is that of Prince T——, from Moscow, a young nobleman of a consumptive family. His complaint arose from

a neglected catarrh; he was about twenty-two years of age, of a thin, spare habit of body, his chest narrow and contracted, his neck rather long, but in other respects he was well made. When I was called to him by his medical attendants his life was despaired of, as the bad symptoms had come on with great rapidity, and his strength was much exhausted. His cough was frequent, his breathlessness great, the expectoration very scanty, consisting of small portions of altered mucus, mixed apparently with pus. He was consumed by the violence and duration of night sweats, and incipient colliquative diarrhœa. All these symptoms were brought on by a disease of about two months continuance; and as he had had no decided symptom until then of any pulmonary affection, there was every reason to hope that the disease was owing to neglected bronchites, rather than to ulcerated lungs. He was however daily getting worse when he commenced the trial of the tar vapour.

The apartment in which he resided during the day, and his bed-room, were kept moderately charged with it; his diet was regulated, and the only medicines he employed were the mucilaginous decoction of althea and opium. Under this simple treatment he regained his health, and in

about six months after his recovery he accepted a situation attached to the Russian mission at an Italian court, where I have understood he continued about a year ago, quite free from any relapse.

Although these cases, and several of those which were cured in the hospital for the poor, owed their recovery to an atmosphere constantly charged with the vapour of boiling tar, I by no means recommend the trusting to this method, in preference to the interrupted and repeated action of an atmosphere more highly charged. This method appears to answer better in some cases than in others. An atmosphere, although moderately charged, always brings relief, but it does not appear to be always capable of inducing a permanently healthy action where ulceration has once began. Several patients, labouring under advanced phthisis, have derived only a palliation of their symptoms from it, and have ultimately fallen victims to the disease, notwithstanding its unremitted application. That it has oftener failed to cure than succeeded, I have no hesitation in confessing; but the good it has done ought to be an encouragement to proceed with the trial of this and similar remedies; for even where it did not effect a complete cure, it ge-

nerally gave much relief, and seemed to prolong the life of the patient.

One case has occurred to me where a consumptive young woman could not bear the smell of the tar even in its natural state. When brought into her apartment, she was immediately seized with syncope.

In one case, where the patient had already laboured under all the more decided symptoms of tubercular phthisis, and in whom the uninterrupted progress of the disease, great emaciation, and generally disordered functions of stomach, liver, and intestines, rendered all hope of perfect recovery vain, the tar vapour diminished the cough and expectoration, and relieved the oppression of the chest to so great a degree as to deceive, not only the friends of the patient, but the medical attendants also, who believed for several months that a cure would be effected. The amendment was great and remarkable during the first six weeks; the disease afterwards became stationary, and continued so for nearly three months; but after a violent paroxysm of grief, accompanied by frequent sobbing and tears, a fit of coughing came on, which produced a considerable hemorrhagy from the lungs, giving a fatal turn to the disorder.

In the following case I trusted entirely to the tar vapour, I mean as far as relates to medical treatment, because the patient, when I first saw her, was, fortunately for her, in the commencement of pregnancy, and knowing how favourable this state is to such patients, I hoped to effect the complete healing of the ulcerated lungs by the topical application alone before parturition, nor was I deceived in this hope.

The patient was a woman admitted into the hospital for the poor in St. Petersburg on the 9th October, 1818; her name Sophia Eilgand, twenty-five years old, of a pale and delicate frame. She was placed under the care of Dr. Roose, one of the physicians of that charity, who conducted the cure according to the directions he had received from me. Two weeks before her admission she had been exposed to great cold and distress; she was an unmarried woman. At first she was seized with rigors, succeeded by heat, which terminated, like a regular accession of fever, in a copious perspiration. She had an irritating, frequent, and dry cough, and violent stitch in her left side. The frequency of the cough augmented the pain to such a degree, that at last it became permanent; but it was ultimately relieved by the expectoration of a considerable quantity of

purulent matter. On her admission into the hospital she was found to labour under a frequent cough with purulent expectoration, pain in her side, great emaciation, and rapidly declining strength. She had colliquative diarrhœa occasioning about eight watery stools daily. Her pulse was quick, but it could not be said that she had a well marked hectic fever. She had little or no appetite. Before I saw her she had been taking, by Dr. Roose's order, a mixture composed of eight ounces of the mucilage of salep, in which ten grains of the extract of hyosciamus were dissolved: of this she took an ounce every two hours, and in a short time the diarrhœa diminished, but was not stopped, and the cough became less frequent. On the 24th October I caused her to be put into a chamber, in which I ordered the tar to be kept almost constantly in a state of low ebullition, and every kind of medicine to be suspended. About the end of the same month the diarrhœa entirely ceased, and she had very little cough, but she complained of great lowness and a sense of weakness in her chest. I then ordered her a decoction of polygala senega, with a small quantity of volatile alkali, endeavouring to avoid the use of opium and other narcotics.

Under this treatment and the administration

of the tar vapour she entirely recovered, and was dismissed from the hospital on the 25th November, the same year, being quite free from cough, dyspnœa, and every symptom of her disorder.

The trials made in Great Britain with the tar vapour, though generally unsuccessful, for the reasons I have pointed out, show at least a readiness in a number of the faculty to make trial of a new remedy, and I feel a satisfaction in the confidence that has thus been put in my recommending it. Dr. Lazzaretto is the only one who professes to have tried it successfully in this country. Having learnt how injudiciously it has been administered by the greater number who have employed it, I may be allowed to indulge the hope, that an object so interesting, both to humanity and to medical science, will not be abandoned.

There are physicians who believe that consumption is more frequently a symptomatic disorder, having its seat in the mesentery or liver, rather than in the lungs. The existence of cases of symptomatic phthisis cannot be denied; but in the greater number of those which I have seen it has been doubtful to me whether the disease began first in the lungs or in the mesentery.

A very scrophulous disposition, when once set

into action by the operation of climate, or long illness, poor diet, or other general causes, often breaks out simultaneously in several parts of the body at once, especially in the lungs, mesenteric glands, the peritoneum, and liver. Those who have tubercles in the lungs to any great extent, are also frequently found with scrophulous affections of other organs. In some, who have been examined after death, these affections of the mesentery itself, and its glands, have been more conspicuous than the small-sized tubercles of the lungs; and I therefore cannot express any surprise that in such cases the disease has been attributed to that source, although even here it must have been difficult to say which organ was first affected. The same observation holds good in regard to the phthisis which is found connected with some kinds of disorganization of the liver. In these last, the phthisis is indeed more decidedly symptomatic, the affection of the liver being in truth the primary disease. But to shut one's eyes or rather one's understanding against the positive proofs of idiopathic phthisis pulmonalis, is to exhibit a very limited power of embracing the whole testimony of facts, and a disposition to draw very erroneous conclusions from solitary cases. Such instances of erroneous generalization in medicine are unfor-

tunately but too frequent. The practical conclusion, however, resulting from the acknowledged truth, that all the symptoms of consumption may arise from diseases which are not seated in the lungs, as well as from those which really have their seat in them, is, that too much attention cannot be paid to individual cases, so as to distinguish the primary from the symptomatic affections, and to vary the treatment according to the variety of the case. Where scrophulous disposition is general, and affects the viscera of the abdomen, as well as those of the chest, it is surely needless to say that it is not from tar vapour that any good can be expected.

As it is agreeable to just and reasonable analogy, and consonant to all our ideas concerning the cure of ulcers, and vitiated action of diseased membranes, to suppose that more good may be effected by directly applying remedies to the diseased spot, than by any attempt to reach them through the medium of the stomach; and as we are only commencing a set of experiments on medicines which can be breathed; it may happen that many other volatilized substances may be found which are more efficacious than tar. Those which I have hitherto tried are the balsamum copaibi and common turpentine, but I have not

derived much benefit from them. The vapour of heated balsam of Peru I have tried in one case very lately, and I thought it did good. The coal tar I have not yet had an opportunity of trying; but this and many other resinous substances are certainly deserving of experiment. The benefit which many consumptive people have obtained from marsh effluvia, from an atmosphere charged with the breath and perspirable matter of cows, from the putrid atmosphere of cat-gut-makers, &c. justify the trial of a mixture of carbonic gas, carburated hydrogen gas, and sulphurated hydrogen gas, with common atmospheric air in varied proportions; and if we could trust to some very old authorities, there is reason to believe some of the most deleterious substances may be breathed with success by the consumptive.

In a spurious work ascribed to Galen (the Euporistics), orpiment and pepper are recommended to be smoked by patients labouring under phthisis; but as the author of the same work asserts that burnt sponge also does good in the complaint, and experience has proved that there is scarcely a more pernicious remedy for consumptive people, no faith ought to be placed in the recommendation; and I should not have taken notice of it, had not Riverius related the

history of a remarkable cure of phthisis which was effected by the fumes of arsenic.

George Ernest Stahl recommends the fumes of volatilized antimony as a powerful remedy for consumption, and as a means of restraining the cough, and he asserts that he himself derived the greatest benefit from inhaling the sulphureous vapours of crude antimony.

In the preface I have given my opinion concerning the probable action, and the possibility of inhaling the diluted fumes of arsenic.

But without having recourse to any thing so irritative and deleterious, a great field is opened by employing resinous substances which have some analogy with tar, and which may be tried with impunity, if not with decided advantage. All the natural bitumens, resins, and gum resins, which do not yield an acid on the application of heat, may be tried with perfect safety. The elder Pliny, after treating of gum ammoniac, remarks, that forests and woods which abound in resinous effluvia are highly beneficial to the consumptive; and F. Hoffmann, in commenting on Poter of Anjou, takes notice that Gehema relates a case of consumption which was cured by the effluvia of camphor, assafœtida, and castor only.

All these facts bear on one and the same point, and when connected with the anatomical observations of Laennec concerning the cicatrization and curability of scrophulous ulcers in the lungs, demonstrate the necessity of enlarging our experience in this hitherto hopeless department of the practice of physic.

CHAPTER II.

On the Influence of Temperature and Climate in Preventing and Curing Consumption.

When it is considered that consumption is most prevalent in countries and districts which are subject to great and rapid changes of temperature, and that it is comparatively rare in those which are noted for steadiness of seasons, no one will doubt of the influence of climate either in forming the disposition to this complaint, or in hastening or retarding, according to circumstances, its progress when once formed.

The strumous or scrophulous constitution differs from the healthy one chiefly by a very marked difference in the strength and constitution of the vascular system, and which is most remarkable, in the absorbents and lacteals; the sanguiferous vessels also seem to partake of the general weakness and laxity; their coats are too weak for the actions of health. The absorbents in particular are of the most delicate texture, and are more easily torn by injected fluids than the same vessels of a healthy person. It is na-

tural, therefore, to suppose that the congeries of vessels, which form the lymphatic glands, should partake of the same delicacy of structure; and hence may be deduced an easy solution of almost all the phenomena of scrophula, without the necessity of supposing any general acrimony or vitiated state of the fluids, of which there are no proofs.

The contractile power of all living vessels, whether sanguiferous or lymphatic, seems to be proportionate to the physical strength of their coats, and as their chief functions depend on their contractility, it is evident that these must be more or less imperfectly performed, accordingly as this power is more or less deficient.

Languid circulation, and partial congestions, are the more immediate effects of such defective organization; hence the cold hands and feet, the sense of languor and debility, and the first causes of scrophulous inflammation to which the glands and membranous parts of a scrophulous person are subject. We are as yet too little acquainted with the functions of the lymphatic glands, to say what the assimilation of fluids is which takes place in them. Every thing which is absorbed, either from the air, from the contents of the various cavities of our frame, all the useless solids

and fluids which the absorbents take up, are conveyed to these glands, and appear to be mixed and assimilated in them, but by what peculiarity of action we know not, nor is this necessary to the understanding either the tumefaction or inflammation of these parts. The doctrine of inflammation, as laid down by Dr. Wilson Philip, I have always considered, since its publication, as being perfectly consonant to, and explanatory of, all that takes place in the origin of inflammation, whatever be its variety, remote or exciting causes. It applies equally well to scrophulous as to active inflammation.

Whatever debilitates any set of capillary vessels to a certain extent, produces congestion in them. This congestion, if continued for a certain time, or if frequently renewed, always ends in inflammation. In glands the stagnation soon produces compression of other vessels, and an increasing series of events all terminating in a morbid accumulation of fluids.

During the congestion of fluids in absorbent and lymphatic vessels, and before inflammation has arisen, the secretions which depend on these vessels are either arrested or changed, or new matters are formed, which begin to be deposited in their extremities, and in the fine membranes

into which they enter as part of the membranous structure. In this way the matter of tubercles, and various other scrophulous tumours that have not as yet become inflamed, appear to be produced. When formed, they do not seem to act so much by virtue of any specific poison, or acrid humour, as by the mechanical irritation which they excite. In the lungs they compress both the air cells and blood vessels. When to such local causes is superadded either the constant action and energies of many debilitating powers, such as frequent and sudden transition of temperature, cold and moisture, confinement in bad air, poor diet, or too much, too rich, or improper diet, want of exercise, bad water, &c. there is little difficulty in accounting for either the increase and multiplication of tubercles, and other scrophulous tumours, or for the over-excitement, and the consequent inflammation of the membranes, and other parts in immediate contact with them.

The peculiar constitution just now described may be brought on by the operation of other causes, besides those just enumerated, but acting on a similar principle, such as the abuse of mercurial medicines, hemorrhagies, or excessive and frequent evacuations; or it may be inherited from

lous disposition and scrophulous action, provided they be employed before complete disorganization has taken place in any essential organ.

If the appetite be deficient from much mucous secretion in the stomach, or intestines, the *pulvis scammoniæ compositus* may be given with or without additional calomel, according to circumstances. But I am very cautious of giving large doses, either of the one or the other of these medicines, to any scrophulous child, especially when the dose ought to be repeated often; for although perfect digestion is not to be expected until the bowels have been completely and well relieved, and the functions and peristaltic motion of the intestines brought into due order, yet the operation of purging, by determining the balance of circulation to the internal parts, is a remedy which must be used with great discretion, except in scrophulous children of a full habit, and who are great eaters.

If full purging is not to be too frequently employed, yet mercurial medicines in minute doses, given as alteratives, and in combination with others which act on the skin, will be found highly beneficial. The common blue oxide of mercury with antimony, and in combination with the pil. galban. comp., and a strong de-

coction of sarsaparilla, I have found to be very useful medicines for reducing scrophulous glands, and assisting in the resolution or absorption of all scrophulous depositions.

In certain constitutions, some of the mercurial preparations act better than others; this must be found out by trial: for these medicines must necessarily be adapted to the age and individual constitution of each child.

To the physicians and medical practitioners of this country I need not employ any arguments in favour of mercurial purges or mercurial alteratives. Multiplied experience has made us fully comprehend the value of mercury, when skilfully administered, and also the many injuries which may arise from its abuse; but I suspect it will be long before the prejudices which are entertained against it by the greater number of foreign physicians, chiefly by those of France and Germany, can be overcome.

This excellent remedy, which alone of all the eccoprotic tribe has a specific virtue in curing many incipient cases of organic mischief, where the constitution is not altogether decayed and broken down, has suffered much calumny and unjust reproach from the abuse that has been made of it in such a climate as ours. The prac-

titioners of India, and of other colonies of similar temperature, have been chiefly to blame in this; for on their return home, they have practised as if in a hot climate, and have succeeded in making many of the resident physicians of Great Britain imitate them in their prescriptions.

I have certainly found mercurial medicines highly successful in the treatment not only of incipient scrophula, but of many obstinate chronic disorders, and I have found none more useful than well prepared calomel; but during the course of thirty-four years' uninterrupted experience, I have never seen so much good derived from large as from small, and indeed minute doses of this remedy, where it was intended to act as an alterative. In this climate, it is scarcely possible to give a single grain of calomel oftener than once a day, without its producing purging, except it be combined with opium, which is not always desirable.

In scarcely any diseases have I seen much good obtained by a full mercurial course, except in some cases of dropsy, asthma, hepatites, and syphilis.

In acute diseases, large doses of calomel may be given with impunity, but with no greater success than a moderate and just dose. It will be

asked, what that is? In this, and all climates of moderate temperature, from five to eight grains is the largest quantity I have ever found it necessary to prescribe at once, as a purge, either in scarlatina, croup, or threatening hydrocephalus; and in chronic cases, scrophula, or threatening organic mischief, the third of a grain is the most common dose, taken twice or thrice a day, until a slight tenderness of the gums is felt.

In scrophulous patients of a pale emaciated countenance, and weakly constitution, it appears to me doubtful whether mercurial medicines ever do any good, except as aperients, and, therefore, in such cases, I never induce mercurial action.

Scrophulous children of delicate frames do not in general bear much purging, except in the case of Butter's infantile fever, which is now and then cut short by a full dose of scammony and calomel.

In cases, the consideration of which led to this digression, those for instance where the constitution is beginning to suffer from scrophulous influence, a small dose of calomel, of half a grain or one grain, given every second or third night, followed on the ensuing morning by a little in-

fusion of senna, and alternating the decoction of sarsaparilla, and afterwards with a decoction of menyanthes trifoliata, or an infusion of anthemis nobilis, with arnica, or carduus benedictus, or any mild tonic, having scarcely any astringent principle, are highly useful, the tepid salt bath being continued as a most essential part of the cure.

Neither of the two classes of scrophulous or strumous children is subject to phthisis pulmonalis until about or after the age of puberty. From this period, until the twenty-fifth year, sometimes much later, tubercles are apt to form in their lungs, from causes which have no such influence on other subjects.

The struggles of the constitution at the age of puberty are in some cases the only apparent cause of the formation of tubercles, where hereditary disposition is strong; but co-operating with these, we often find neglect in point of dress, late hours, and excess in eating and drinking among the rich; damp air, cold lodgings, poor diet, little sleep, hard usage, and anxiety among the poor, and the abuse of strength and vitality, arising from ignorance, temperament, or immoral and thoughtless companions, too common, alas! among all young people of both sexes, whether educated in schools or at home.

No wonder if such debilitating powers hasten the formation of tubercles at the age alluded to, especially in weak lymphatic constitutions. It is, therefore, a matter of serious importance, to watch the first symptoms of their formation, and to prevent, if possible, the evil causes just enumerated, from co-operating with hereditary disposition, growth, and the development of puberty.

Where a little dyspnœa and slight frequent cough have already commenced, an uniformly mild temperature, breathing an atmosphere charged with the vapour of heated tar, as a topical stimulant to the absorbents of the lungs, sponging the chest frequently with tepid vinegar and brandy, in an apartment sufficiently warm to prevent the catching cold, rubifacients, the tartar emetic ointment, a mild yet nutritious diet, and keeping the bowels gently open, are the best remedies.

That tubercles are forming in the lungs, or are already formed, we judge chiefly by the rapid emaciation and loss of strength, although a sufficient quantity of food is taken daily; by a frequent hacking dry cough, and occasional dyspnœa on taking exercise, especially on going up an ascent; by flying pains in the chest, or by

a fixed though moderate pain on either or both sides of the chest; by a peculiar shrinking of the features and delicacy of look; and by a knowledge of the scrophulous constitution of the patient, and the natural operation of the well-known and numerous set of causes which produce the disease, and by the employment of the sthenoscope.

When tubercles have become numerous, large, inflamed, or softened, phthisis soon announces itself, either by a gradual increase of cough, and the expectoration of a curd-like kind of mucus, or by the sputa being of a puriform character, sometimes tinged with blood; by a rapid decay of flesh and strength, and frequently by a symptomatic fever.

It must be evident that if any thing effective is to be done, it must be before tubercles are too numerous. But the greatest success is not always obtained in the very early stages of tubercles; for provided a stop either natural, or arising from medicine, has been put to the formation of new tubercles, those which already exist are most easily cured, at the period when they become naturally softened. Of the medicines which promote this salutary operation I shall take notice very soon.

Whoever has had much experience with the consumptive, and has been an attentive observer, must have remarked two very distinct classes of tubercular consumption: one of slow and insidious progress, accompanied by all the decided marks of phthisis, except a quick pulse and daily symptomatic fever; the other characterised by hectic fever, with daily exacerbations. These are not stages of one and the same disease; for although the first, which may be called the chronic kind, is accompanied at last with hectic fever, yet the symptoms of tubercular phthisis may continue making slow progress for one or two, or even several years, before this event occurs; whereas the acute kind of tubercular phthisis is accompanied with a quick pulse and daily exacerbations of fever from almost the beginning of the complaint, and in comparison with the other kind, runs a very rapid course. The difference between these two kinds of tubercular consumption is not in degree, but in the constitution of the patients and the state of the lungs.

In the chronic kind, the formation of fresh tubercles goes on slowly, and the enlargement of each tubercular mass, and its progress in softening, is also slow and unaccompanied by inflam-

mation. When one bag of softened tubercular matter has been evacuated by coughing, the patient apparently recovers a little, the frequency of the cough is sensibly diminished, and there is a general improvement in his health for a short time; he has a kind of fallacious respite, which is often attributed to the operation of medicine, which, if judiciously applied, certainly does assist nature in her operations. In a certain lapse of days, weeks, or even months, the dyspnœa increases, the patient has bad nights, his strength fails, and at last there is a fresh attack of cough, with the mixed expectoration peculiar to tubercular consumption. Of those who recover, I have known some who have struggled in this manner for nearly a year before they could be said to be in a state of uniform convalescence, and consequently before the greater number of tubercular masses were resolved. In women, the non-appearance of the catemenia, which is always a concomitant of an advanced phthisis, does not occur in this chronic kind until the last periods of emaciation, whereas, in the acute kind, it generally occurs soon, the *rationale* of which is too evident to require explanation.

The prognosis in this variety of phthisis is

certainly unfavourable, like that of all the varieties of pulmonary consumption; but my opinion is, that rather more than a tenth part of those who are attacked with it may be saved if the disease be taken in time, and the most watchful attention be paid to every circumstance of the case and its various changes.

Local stimulants, such as the vapour of tar, and such internal medicines as experience has demonstrated to have considerable efficacy in correcting a scrophulous disposition, are the means which are to be chiefly trusted to, along with temperature and diet; but the treatment is always long, and requires what few patients easily submit to, great restraints for several months together.

People labouring under this variety of consumption, as well indeed as all others who suffer from the other varieties of the disease, ought to be confined rigidly to the house during winter, and almost equally so during summer, except the weather be very calm and warm; in which case I allow them to take as much exercise as their strength permits, twice or even thrice a day. The apartment is always kept charged with the vapour of tar, duly prepared, sometimes more

strongly charged than at others, while the dryness of the air is obviated as much as possible. All tea and coffee and acid drinks are forbidden.

If the patient has sufficient appetite to relish good soup of beef or mutton for breakfast, I prefer this to every thing else; if not, he has cocoa, milk, or chocolate, according to the state of his stomach, and according to the facility with which he digests them.

If he have a craving for food, or much appetite, calf's-foot jelly is permitted between breakfast and dinner, as often as the patient wishes for it. At dinner he has any variety of animal food which agrees with him, but he must confine himself to one kind each day. He is allowed no *entremets*. He has, in fact, soup and bouillie, or soup and some roasted or broiled meat in moderate quantity.

The medicines which I have found to assist nature the most effectually in promoting the resolution and discharge of the tubercular matter, have been a combination of the compound pill of galbanum, with the sulphurated oxide of antimony, or the pulvis antimonialis, now and then calomel or cinnabar, and always some extract of hemlock, and a little opium. *See Formulæ*, 6, 7, 8. These may appear to many very compound

and complicated prescriptions. To which the only answer to be given is, that very many compound medicines answer better than simple prescriptions. To those who think that the science of medicine is improved by an affected simplicity in prescribing, I would remark, that modern pharmacopœias are shorn so much of old and approved receipts, on account of their being extraordinary compounds, as to be almost quite useless in some cases.

Along with the above-mentioned pills I give the Iceland moss and sarsaparilla; and particular symptoms are corrected as usual by particular remedies, which every practitioner knows and employs for such purposes. It is often necessary to keep a patient who labours under this chronic kind of tubercular consumption many months on the same plan of cure.

It is in this variety of consumption that much good is sometimes derived from other gentle stimulants; the medical powers of which are chiefly exerted on the absorbent and lymphatic system of vessels, such as the seeds of the phellandrium aquaticum, so much in vogue at present in Germany.

The cases in which this remedy has proved of most benefit have not been clearly pointed out,

and hence, like all medicines of the kind, it has produced much disappointment with many, while every now and then cases of extraordinary cures are attributed to it.

Having repeatedly tried it in pulmonary consumption, it was my bad fortune to have given it in cases, in which I am now convinced it ought not to be given, and this merely because those who eulogize it have not been sufficiently explicit.

The remedy is not found in any of our Pharmacopœias or Dispensaries, and as it is not employed in Great Britain, I take this opportunity to say a few words concerning it. The first author who has given a detailed account of its virtues, as then known, is Ernstling, who in a Dissertation, published at Brunswick, in 1739, and entitled Phellandrologia, bestows great praise on it as a vulnerary. He recommends it, as greatly assisting both nature and art in the cure of obstinate ulcers of long standing, also for the cure of intermittents, and affections of the breast, likewise in certain diseases of horses.

The attention of the German physicians appears to have been again directed to this medicine about twenty-six years after, when Lange, in his work *de Remediis Brunswicensium domesticis*, 1765, takes particular notice of the phellandrium

aquaticum. Murray, in his Apparatus Medicaminum, quotes Lange's work as having been published in 1771. But this is a later work of the same author, who, by this time, had tried the medicine in many cases, the result of which he gave to the public under a general title, "*Abhandlung über die heilsamen und höchst wunderbaren wirkungen des Rossfenchels oder die so genenten Peer Saat, &c.* This work, to which an engraving of the plant is added, was published at Frankfort and Leipzig. In this work, Dr. Lang recommends it in the strongest terms, from repeated trials, for the cure of old obstinate ulcers, and in pulmonary consumption.

Since that period the medical journals of Germany have published various cases of recovery from consumption, which were chiefly attributed to the phellandrium aquaticum.

The seeds, which are the part employed, are oblong, striated, and resemble in size the anise seeds. They have an aromatic and rather acrid taste, and are best exhibited in substance from the dose of one scruple to that of a drachm, twice or thrice a day.

When the pulse is uniformly quick and hardish, where the cough is frequent and the expectoration scanty and difficult, the seeds of the phel-

landrium have uniformly appeared to me to do harm. But in such cases of tubercular phthisis as I have been describing, and in the phthisis pituitosa, or far advanced cases of chronic bronchites, they do good. In short, they act very much like the senega root, so celebrated formerly in pectoral complaints.

When the weather is windy, raw, and cold, the patient ought to keep within doors. I do not permit those who cough much even to go into a passage or into the staircase; or if they quit their chamber, in order to have the air completely ventilated and renewed, which ought to be done twice a day, the patient puts on some additional covering in cold weather before passing into the other apartment; which apartment ought to be immediately adjoining the one he leaves.

In this way I have lately treated a patient, who is now recovering, after five months of this kind of treatment; and who, during the greater part of that time, especially the latter part of it, has taken no other variety of medicines than those just mentioned, except an additional dose of laudanum to correct diarrhœa, or rhubarb to correct too great costiveness.

The patient alluded to, a young lady, could not reconcile herself at first to the tar vapour,

on account of its smell, and the head-ache which it produced; but finding relief from it in her breathing and cough, she persisted, and at last her chamber was charged with it night and day without its producing head-ache. Her improvement for the first three months was slow and doubtful. At last the cough, pains, and uneasiness which accompany the softening of the tubercles, became less frequent, and she seemed to have longer intervals between the ripening, as it were, of each succeeding cluster. A pain under the right shoulder blade, and a slight pain on pressing the left hypochondrium, gave me the suspicion that this lady had a diseased liver as well as diseased lungs; and I gave her, in consequence, the common blue pill with opium, when she first applied to me, until a slight salivation occurred. The pain in the region of the liver was completely removed by these remedies and occasional doses of taraxacum; but the cough, dyspnœa, expectoration, and emaciation were making progress. I then put her under a course of blistering and pustulation, by means of tartar emetic ointment, as already stated, and for the rest trusted almost entirely to the formula 6th and 8th and the tar vapour. She is now gaining flesh and strength, but she still has a very slight cough

in the morning, and consequently still continues the tar vapour and the other medicines.

The health of this patient had been on the decline, without any evident cause, for three or four years previously to the breaking out of the disorder. It was only last autumn that she was seized, for the first time, with pains in her left side, about the middle of the third or fourth rib. A troublesome cough ensued, with slight expectoration, which at times was tinged with blood. She began to be emaciated long before the cough commenced, but from that time she lost both strength and flesh rapidly, was easily fatigued, and had shortness of breath on taking exercise. Her catamenia were too frequent as to period, but not abundant. Of late she has been regular in this discharge. The expectorated fluid was of that mixed kind peculiar to tubercular phthisis.

The tubercular consumption, which begins with febrile heat, pains in the chest, a hard, quick, and small pulse, and a quickly spreading scrophulous inflammation of the lungs, is incurable as long as that inflammation continues, and it runs to a fatal excess in a very short time.

In this climate, where the daily vicissitudes of temperature are great and frequent, people la-

bouring under tubercles in the lungs are much exposed, during the maturation of these, to catch cold, and to causes of inflammation. When this occurs in a constitution already much disposed to consumption, small vomica are frequently formed, including some of the tubercles as a nucleus. The whole of the tubercular mass seems then to run into suppuration: this destructive process spreads rapidly from one portion of the lungs to another, and is accompanied from the beginning with pain in the chest, quick pulse, and much hectic fever. In this case the tar vapour is inadmissible.

I have known this case, in a few instances, to be arrested and converted into the chronic kind, before so much of the lungs was disorganised as to become fatal, but such cases are exceedingly rare.

It is often imagined that the quick pulse of those who labour under the acute kind of tubercular phthisis is entirely owing to debility. Were this explanation of the symptoms only made use of to satisfy the anxious inquiries of some patients and their friends, it might pass unnoticed and without animadversion; but, unfortunately, it forms part of a general creed or doctrine in medicine, and is believed by many

medical men to be the true cause of the phenomenon. This leads to a most injurious employment of stimulating and tonic remedies, such as myrrh, squills, tincture and balsam of peru, cinchona, steel, &c.

In both acute and chronic tubercular phthisis the cough is in general the chief source of anxiety, both to the patient and to his medical attendant; and almost all the remedies given in such cases consist of expectorants, combined with opium and other narcotics.

The employment of stimulating expectorants, in cases of this kind of tubercular phthisis, is in general very hurtful. Squills and gum ammoniac, which are often exhibited, ought to be most carefully avoided; and the treatment should be conducted with remedies which experience has pointed out as the most efficacious in allaying febrile action, the scrophulous affection, and the frequency of the cough naturally modifying the prescription.

These remedies, considered under a general point of view, are such as act on the skin, and consequently tend to unload the lungs of the habitual congestion, to which their weakness, and the irritation arising from tubercles, give birth; and, secondly, mild stimuli, the action of which

is directed to the lungs; and, thirdly, mild general tonics. In one word, the cure must be anti-febrile, and anti-scrophulous, and not merely anti-catarrhal, as it is but too often attempted to be.

Stimulating expectorants and powerful tonics are to be carefully avoided, as has been already observed, on account of their tendency to excite inflammation around the tubercles, and to promote the speedy formation of vomicæ, an effect which I have seen both squills and gum ammoniac produce, even when given in very small quantities. These two medicines I have entirely renounced in all cases where I either dreaded consumption or believed it to be already formed; and this, most assuredly, not from any prejudice or pre-conceived notions concerning their agency, but merely in consequence of multiplied trials, and seeing the bad effects which followed their administration in every instance; bad effects which I was long unwilling to attribute to them, acting and believing at that time in imitation of older practitioners than myself.

In cases of dry cough, such as often accompanies tubercles in their earliest stage, one is much tempted to give both squills and gum ammoniac in combination with opium, ipecacuan, with demulcent medicines, or in small doses, with

hyosciamus and other narcotics, as expectorants; but comparative trials have convinced me that they generally do harm, and tend to bring the tubercles into a speedy and often extensive ulceration. If the prescriptions in which these medicines enter, seem to do good, it will be found that the benefit is produced by the opium or other narcotics, and that if the squills and gum ammoniac are omitted, still more good is obtained. But the best expectorants, that is, the best remedies for subduing the peculiar inflammation and excitement of tubercular lungs, are the red sulphuret of quicksilver, combined with any of the preparations of antimony most commonly in use, such as a very diluted solution of its tartrate, or a due dose of its red sulphuret, or the common pulvis antimonialis. The remedies I chiefly trust to in the acute tubercular phthisis are referred to in *Formulæ* 9, 10, 11.

The digitalis hyosciamus, and hemlock, are useful additions for allaying the frequency of the cough. *See Formulæ*, 12, 13.

The hydrocyanic acid is not so generally useful as these combinations; but where there is much of that kind of pain and uneasiness in the chest which inflamed tubercles excite, I have certainly derived benefit from it. It is, however, on the

whole, a very uncertain and unsatisfactory medicine; and this arises not only from its speedy spontaneous decomposition, but from some difference in its strength, as prepared by different chemists.

In very advanced cases of tubercular phthisis, whether chronic or acute, the hydrocyanic acid appears to me, from repeated trials, to be quite inadmissible. It produces so much insensibility of nerves and general torpor, as to impede the necessary expectoration, and consequently to beget an increase of dyspnœa and uneasiness.

In regard to myrrh and gum galbanum, I employ them in the more advanced cases of tubercular phthisis, where I suspect nature is not active enough in resolving or softening the tubercles. They are, perhaps, not such powerful expectorants as gum ammoniac, and on this very account they are to be preferred in tubercular cases. They are stimulants to the lungs, but they seem to act more on the venous and absorbent vessels than on the arterial and secreting vessels. I have derived considerable advantage from them when combined with antimony and opium, or ext. conii, or hyosciamus, according to the circumstances of the case; that is to say, when there is not extensive scrophulous

inflammation, and the constitution of the patient is not yet undermined by hectic fever, copious expectoration, or night sweats, &c.

When the scrophulous disposition is strong, and that inflammation has been excited by catching cold, the inflammation spreads rapidly through tuberculous lungs, and the disease gains ground, notwithstanding every remedy is judiciously exhibited. Neglect and mismanagement may give a fatal tendency to a case which might have recovered. If the tubercles are very numerous, large, and the disease marked by a rapid decline of strength, emaciation, and a quick small pulse, there is no foundation for hope while such symptoms continue.

The chief objects to be held in view (indications) in every case of tubercular consumption, let the period of the disease be what it may, except in the very last stage, are—

1st. To prevent the formation of new tubercles.

2d. To assist nature, either in causing them to be absorbed, or in the natural process of softening and discharging them.

3d. To prevent excess of action or inflammation.

4th. To prevent the rapid loss of strength.

Every effort must be made to stop the formation or rather increase of tubercles.

Among the means recommended, blisters and the formation of deep external ulcers or setons are recommended.

Blisters are always safe remedies, and are highly useful for the relief of the slight pains which accompany tubercles. The same good effect is obtained from the formation of pimples and pustules on the skin, by means of tartar emetic ointment, ointments composed with the tartrate of antimony, or solutions of the same; and although both of these remedies are considered in the light of merely temporary palliatives, yet when they are often repeated, especially in the commencement of the disease, they have appeared, in conjunction with a well-regulated temperature and judicious treatment, to have given a most favourable turn to the disorder.

In order to obtain any good from them, they ought to be renewed every four or five days, attacking different parts of the chest in succession. But there is no rule without its exceptions, and in medicine the exceptions are most numerous. There are many individuals who suffer so much nervous irritation and symptomatic fever, with loss of appetite and debility, from very slight pain, if long continued, that it

would be folly to persist in ordering repeated blisters or irritants to the skin of such people.

I have known very disagreeable symptoms of this kind produced both by a blister and the pustulation of tartar emetic; but these cases are fortunately very rare.

As to setons, issues, and the actual cautery, all of which act on the same principle, that of producing a deep ulcer in the skin and cellular substance, they have been most highly praised and recommended from the earliest periods of medicine to the present day. Every author, of extensive experience in the disease, has written in favour of them; and many cases of wonderful recovery have been attributed to them.

The practice of Celsus, in regard to external ulceration in the commencement of phthisis, is severe, and such as few patients, now, would submit to; but his advice proves to us the great confidence he had in this remedy. "Si vehementior noxa sit" (he says, when treating of incipient phthisis), "neque febricula, neque tussis quiescit tenuisque corpus adparet, validioribus auxiliis opus est. Exulcerando est, ferro candenti uno loco sub mente, altero in gutture, duobus ad mammam utramque, item sub imis ossibus scapularum quas ὠμοπλάτας Græci vocant,

sic ne sanescere sinas ulcera, nisi tussis finita fuerit, &c." A. C. Celsi Medicinæ, lib. iii. c. 22.

A modern physician would hardly venture to recommend more than the half of this prescription, and in truth the chin, throat, and breast may be spared. A large and deep issue, produced by caustic near the seat of pain, and between any two ribs, or under each scapula, are quite enough, and, indeed, more than is commonly wanted.

Mudge speaks highly in favour of an extensive issue between the shoulders. Riverius mentions two cases of successful cure by means of the same remedy. Bartholin also relates a case in which he thinks an incipient pulmonary consumption was prevented from taking place by a cautery applied between the first and second dorsal vertebræ. But in none of the cases alluded to, and unfortunately in scarcely any other, are the circumstances, at the time the caustics did so much good, sufficiently described to enable us to say, beforehand, in what cases it is likely to produce a similar result.

I have been often tempted to establish large issues in cases of tubercular phthisis; and in general, I am sorry to add, I have been much disappointed.

Independently of the constant irritation and pain which they occasion, I have known them to deprive some patients of their strength, appetite, and sleep, and have reduced them to so much weakness, and that so quickly, that I have often been under the necessity of causing the issues to be closed.

The instances in which they have appeared to me to do positive good, have been in the very earliest stages of tubercular phthisis; and if they have done good in those of long standing, it has been only where the strength and vitality were not much exhausted. They have also done positive good in one or two cases of purulent phthisis, arising from neglected peripneumony; but whether the patients would not have done well without them, by diet and mild demulcents and temperature, is what I cannot take it upon me to assert. Dr. Loeffler, in the third volume of his work, intitled *Die neuesten und nützlichsten praktesчken Wahrheiten und Erfchrungen fur Aertze, und Wrendaergh, vol. 3. page* 319, relates a very remarkable case of complete recovery from tubercular consumption, chiefly by means of an issue. The only internal remedy which was administered in the case alluded to was the seed of the phellandrium aquaticum, with a little

nitre, sal ammoniac, pulv. irid florent. and gum arabic, given three or four times a day.

If the patient's strength and appetite decline during the suppuration of the issue, it ought immediately to be closed, as it does real harm under such circumstances. Where it does good, the appetite increases, the pains of the chest vanish, the cough and expectoration are often very quickly lessened, and the patient gains strength, spirits, and greater facility of breathing.

But the greatest benefit in tubercular phthisis, when the tubercles are softening, and are not too numerous or extensive, is to be derived from breathing the vapour of boiling tar, from temperature, a judicious diet, corresponding to the peculiarities of the patient's stomach and constitution, and also to the uninterrupted employment of antiscrophulous remedies. Where the pulse is hard or full, the skin hot and dry, and the expectoration scanty, I do not employ the tar vapour.

In this, as well as in all other chronic diseases, the medicines most calculated to produce a salutary change in the patient's state of health do not show their effects until they have been taken for several weeks together; sometimes for a much longer period. Where, therefore, a prescription has been happily composed for any in-

dividual case, it is wise, provided it agree with the stomach of the individual, and does not produce any new symptom—it is wise, I say, to persist in the use of it.

But if any one symptom of disease is aggravated during the taking a new remedy, or that the patient evidently loses ground, this alone is a sufficient reason for renouncing or suspending the medicine.

A physician acting entirely from preconceived notions, and persisting in the employment of remedies which he thinks the best, because they agree best with his theory, and who shuts his ears against the repeated declaration of the unfortunate patient, that the medicines do not agree with him, that they rather excite or permit the increase of some distressing symptom, and that he is getting daily worse, is really a very dangerous personage in any family; and what is worse, he is in general a most incorrigible systematic pedant, and a very self-sufficient man.

Patients certainly do now and then deceive both themselves and their physicians in their first reports of the effects of any new medicine; but it is always wise to listen with the utmost impartiality to what they have to say, nay rather

to believe them, until, by a minute examination of their case, we are convinced it is only prejudice, or perhaps disgust against the drug, which have influenced their opinion.

Where the vapour of boiling tar, and the internal remedies are acting for the benefit of the patient, there is, even from the first application of the vapour, a relief from oppression in the chest, and a sense of ease experienced in the act of breathing. But there is not always an immediate or even a very speedy diminution of cough; and whoever reflects on the nature and progress of the resolution of tubercles can easily account for this. They must be softened, and the fluid matter must be expectorated, while the absorbents are doing what they can in taking off some of the thinner and more fluid parts.

An increase of cough on the first application of the vapour therefore is a common occurrence; but provided it be evidently provoked by the quantity of matter to be expectorated, provided the cough be not dry or attended with pain, or with any tendency to hemorrhagy, the fumigation ought to be continued.

Although little or no good is to be expected from the employment of medicines, which are taken into the stomach in the very advanced

stages of consumption, especially of tubercular consumption, yet the comfort of the patient, and the prolongation of his life, depend in a great measure on the judicious choice of these and diet together.

These palliatives are naturally to be sought for in the class of narcotics; and as the constitution and stomachic feeling of each person differs, they are to be found out by trial and observation. Some agree best with opium, others with hyosciamus, others with cicuta. Digitalis and the hydrocyanic acid will in general do no harm in the very advanced stages of the disease. With many, a combination of two or more of the narcotic tribe produces greater relief than any one alone.

Emetics have been greatly praised by many excellent physicians for their beneficial effects in phthisis; but unfortunately the cases in which they are useful, and the restrictions to be observed concerning their administration, are not noticed; and the younger physician does not gain this intelligence until after many fruitless and painful experiments.

While tubercles are in their first stage, and the cough is consequently accompanied by very little expectoration, emetics generally do harm. I have seen them excite pain in the chest, produce

fever and apparently inflammation of the tubercular indurations.

An author of celebrity, who has written largely on pulmonary consumption (Dr. Reid), has praised the efficacy of emetics, in coughs and in consumption, in such a manner as to lead to frequent disappointment. He says, that the practice of giving them every day, for several months together, may be adopted, not only with perfect safety, but with utility; and his practice was in consonance with this opinion: for after having blooded and purged his patient, and taken off, as he imagined, the inflammatory diathesis, by a few repetitions of these means, and by saline diaphoretics, he ordered an emetic to be exhibited every morning, both in coughs and consumption.

Dr. Akenside, and many others, have also written much in favour of these remedies, without pointing out the specific circumstances which render their administration either safe or salutary. The result of the trials which I have made with emetics does not coincide with the opinions of these authors, except under certain limited conditions.

The good to be obtained by them in phthisis appears to me to be three-fold: first, they cause

any quantity of fluid already present in the lungs to be quickly expectorated, provided the fluid matter finds an easy outlet into the air cells of the lungs, or into the ramifications of the bronchiæ. Secondly, they certainly stimulate the absorbent system, and for some time after their action is over, the thinner parts of the fluid matter in the lungs being quickly absorbed, there is less to cough up, and consequently less provocation to cough. And, thirdly, when the stomach is loaded with bile, or mucus, or indigested food, they give relief by unloading it.

It is therefore clear, that they can do little or no good, but in such cases of phthisis as are characterized by great and copious expectoration: but even in such cases there are many restrictions to be observed. They are very doubtful remedies in the last stages of consumption, where the strength of the patient is much reduced; for although the quantity of fluid to be expectorated is in such cases generally large, the vitality is sometimes greatly exhausted by their operation.

Where an emetic is to be employed in such cases, I always give one which produces sudden vomiting; because I have uniformly found prolonged nausea hurtful, both by the exhaustion

which accompanies it, and by an increase of perspiration which follows it: on this account I never give emetic tartar in divided doses.

However harsh and unscientific the dry vomit of Dr. Marryatt may appear, it will be found on trial to be both easy, safe, and salutary; but, contrary to the general rule, I prefer exhibiting it in the evening to the giving it in the morning; for I have always found that the patient had a better night after it, and felt relieved by its operation. The food which the patient had taken during the day, enabled him to bear the operation of vomiting better than on an empty stomach; and the getting rid of some undigested food which oppresses the stomach in the evening, is of itself a benefit.

When emetics are too often repeated, the stomach always suffers more or less. It is an unnatural operation, and never to be excited but when absolutely necessary; yet I have known emetics given every day on mere system, the practitioner having most assuredly some ideal object which he wished to obtain by so doing, but entirely forgetting what the constitution or stomach of the individual could bear.

The effects produced on the disease and constitution together are the best guides; and he

who examines these dispassionately, and without any regard to the effects which he hoped to realize, will seldom go wrong as to the necessity of repeating them.

It need not, I presume, be repeated, that tubercular phthisis, which proceeds slowly and with scarcely any symptomatic fever, is the one which gives the greatest hope of recovery. In the greater number of such cases, one may trust almost entirely to the tar vapour and temperature. In the first set of experiments I made with it, almost the only internal remedies which I employed were demulcents and narcotics. It is, however, useful to give along with these the sarsaparilla root, antimonials, &c. in the manner I have recommended.

But when hectic fever is once established, such remedies do little good, and antimonials often do harm. The narcotic tribe alone, especially the hydrocyanic and digitalis hyosciamus, with or without opium, with a view of abating the sensibility of the nerves, and allaying the frequency of the cough, are the chief palliatives*.

* The physician must be careful to distinguish the hectic fever from the fever of acute tubercular phthisis, in which minute doses of the liquor antimonii tartarisate, with diluents and demulcents, do much good.

The tar fumigation frequently produces the happiest changes, even in such cases, and ought always to be tried if the patient can bear it.

To allay the force of the hectic fever, there is nothing so efficacious as exercise, either in a carriage, on horseback, or walking, when the patient can bear it, and the weather permits. A stronger proof of its efficacy cannot be adduced than that of the late Dr. Currie, of Liverpool, in the history of his own case; but, indeed, every physician who has made a study of his profession, must know that exercise has been recommended, with this particular view, by many distinguished writers on medicine; by our countryman Sydenham, by Baglivi, by Lassolle, and Desault, of Bourdeaux, all of whom write in praise of it, not as copyists of each other's opinions, but from the experience they have had of its utility.

There is however a great obstacle to its doing good generally in this country: I mean the great and rapid changes of temperature to which a consumptive patient in the open air is exposed. The weather may appear fine and inviting, the patient takes his ride, the wind changes, and before he can get into shelter he has received his death-blow.

From the very loose and careless way, also,

in which this, like many other remedies, is recommended, it often fails to do good; that is, by not timing it properly, either as to the period of the disease, or the time of the day.

When there is a fixed pain in the chest, exercise on horseback is inadmissible. It is inadmissible in dry sandy soils, where the air may be charged with clouds of dust by the slightest gusts of wind; it is inadmissible in all cases of phthisis laryngia, and it is a doubtful remedy in phthisis from hæmoptoe; but in tubercular phthisis, and in that arising from neglected bronchitis or pneumonia, it does good.

The strength of the patient must determine the kind of exercise to be recommended, and the quantity. The best time to commence it is from a quarter to half an hour before the usual time of the accession of the fever.

In the winter, and end of autumn, and beginning of spring, contrivances within doors must be made to supply the place of equitation, if any establishments be ever set on foot in this country for the consumptive.

During the hot stage of the hectic fever, water fully charged with carbonic acid, to which a little light wine, such as Sauterne or Chablie, may be added, ought to be drank frequently, and in small quantities at a time. The excitement this pro-

duces shortens the paroxysm, which is always of importance.

Steel and myrrh, forming the basis of Dr. Moses Griffith's anti-hectic mixture, have done harm in every instance in which I have tried them. Steel is a most injurious medicine in tubercular phthisis. In the pituitous phthisis it may probably do good in some cases; but in no case of real pulmonary consumption have I ever witnessed any beneficial result from it, and I have long since abandoned all trials with it.

The watery extract of myrrh is an excellent tonic: I have often given it in pills, with good effect, along with a decoction of the Iceland moss, with the view of supporting the strength of the patient. Its good effects are temporary indeed in this complaint, but they are of longer duration than most other tonics; that is, they may be continued for a longer period with benefit to the patient than most other tonics.

I have derived no good from the cinchona, as recommended by Morton; but candour forces me to acknowledge, that I have never exhibited it as he recommends it to be given; that is, in large doses every four hours. The truth is, I believe, that every physician who has practised his profession many years, gets into a routine,

and abides by that which has yielded him most service. The tonics I have found to be the most generally suitable to the consumptive are, as already stated, the lichen Islandicus and the watery extract of myrrh, and as much nourishment as the patient can take with safety. The cinchona, in the few cases in which I have tried it, always produced too much heat, thirst, and uneasiness, so that I have taken a kind of prejudice against it in pulmonary diseases. I greatly suspect that the cases in which Dr. Griffith succeeded with steel and myrrh, were those spurious hectics which accompany neglected or obstinate cases of ammenorrhœa; cases which certainly resemble some varieties of tubercular phthisis; and perhaps the cases in which large doses of cinchona were found to be useful by Morton were atonic, and consequently chronic cases of bronchitis.

The uva ursi, as recommended by Dr. Browne (see his Cases of Pulmonary Consumption treated with uva ursi, Oxford, 1805), I confess I have not tried. I was unacquainted with the work until I returned to England. This remedy, which I have given with very great success in diseased secretion from the mucous membrane of the kidneys, ureters, and bladder, I certainly think deserving of a fair trial, especially in the con-

sumption from neglected bronchitis, perhaps also in cases where tubercles are forming, and where there is little or no fever.

In regard to the colliquative diarrhœa, which occurs in the last stages of the disease, I have no observations of any importance to offer. The medicines commonly employed are, perhaps, the very best which can be chosen. The progress of the disease soon gets the better, even of the most powerful.

To correct the colliquative sweats which increase as the disease advances, the sulphuric acid, with an infusion of rose leaves, is generally recommended, and at first always with a decidedly good effect. But this effect soon ceases; for although the acid, when combined with opium, diminishes the night sweats, and seems to allay the cough a little; yet this last symptom soon returns with greater violence than before, and the symptomatic fever, and consequently the night sweats along with it.

I have always suspected, judging from the operation of this or any other acids, when taken for any length of time in consumption, that they oxygenate the blood too much, especially of those who have tubercles in the lungs, even although the symptoms of decided phthisis have not as yet appeared. This opinion, which I

beg to offer as purely hypothetical, has been forced on my conviction merely as a result of experience; and to young people, or indeed to people of any age, in whom I suspect tubercles to exist, I never permit acids of any kind to be given for any great length of time, having always found their protracted employment do some kind of mischief to such people.

The best way of diminishing the colliquative sweats, is by diminishing the violence of the febrile paroxysm as much as possible; for that it will and must increase as the disease advances needs no kind of proof.

I have already stated what I think lessens the hectic fever. In some cases the patient may be sponged with cold vinegar and water during the hot stage, especially in very hot weather, or in a hot apartment. The continued operation of cold does harm. The patient ought to be lightly clothed, and, above all, as the disease advances, his diet must be changed as to the manner of taking it.

Need it be recalled to the mind of the young practitioner, that food, like all stimulants whatever, acts in proportion not only to its stimulating quality and quantity, but also in proportion to the weakness of the individual?

Regular full meals must be avoided as the

disease advances, and a light nourishment ought to be given every two hours, if the wants of the system require it. But this leads me to many other remarks concerning diet in pulmonary consumption, which cannot be better introduced than at present.

Many cures of confirmed phthisis have been effected by diet alone, even in advanced stages of the disease, if we can trust to authority. It is not the most nourishing food and the fullest diet which does the most good; for when, laying all hypothesis and preconceived opinions concerning the nature of hectic fevers aside, we merely inquire what has been the result of experience on this point, we shall find that the greatest benefit has been obtained from milk, weak animal broths of the least stimulating quality in some cases, strong and fat broths in others, vegetable diet rigidly adhered to, and in some cases mere animal fat and farinaceous food, and in others snails or glutinous substances.

Of all these a milk diet is that in favour of which there is the greatest force of testimony. The chief remedies of Hippocrates were caustics and a milk diet, especially that of mares or of asses, which, with the true and accurate feeling of a practical physican, he modifies and limits by the circumstances of the case.

It is well known that milk in general does not agree with bilious people. Hippocrates does not say so *totidem verbis;* but he cautions us against the use of it with those in whom it produces headache, fever, flatulence, or bile in the evacuations. Aretæus recommends consumptive people to take as much milk as possible, and in as large quantities as the stomach will bear it, describing its good qualities with a kind of poetic eloquence, telling us how pleasing it is to the eye, demulcent to the trachea, and a sweet balm which glides easily down to the ulcerated parts! Rhazes speaks highly in favour of milk, and positively asserts his having cured several cases of confirmed phthisis by goats and asses' milk. Sir John Pringle, one of our best and surest practical guides, recommends a milk and vegetable diet; and Dr. Fothergill is of the same opinion. Dr. Moses Griffith recommends, in all cases, a diet of asses' milk, or skimmed milk, puddings, rice, and potatoes.

To enumerate all the authorities in favour of this kind of diet would be only to swell out this little volume most unnecessarily.

Where milk agrees with the stomach of the patient, and yields him sufficient nourishment, it is unquestionably the best diet. In such cases it

ought not to be combined with any other articles of food, except farinaceous grain, or the amylacious substances, for a mixture of animal food and milk often produces a vitiated secretion of bile, when a purely milk diet would have had no such effect.

Asses and goats' milk are preferred by many to that of cows; and several German and French physicians strongly recommend human milk, as being of a quite superior medical and nutritive quality to all others. They advise the consumptive patient to suck the milk from the breast of a healthy young woman. This is an inhuman practice; for if the disease be a true purulent phthisis, the young nurse cannot avoid the contaminated breath of her nurseling, and frequently gains the disease. I have always opposed this in consultation when abroad as unnecessary, and in itself as very doubtful, the evidence being entirely *ex parte*, and as cruel to the poor nurse; but I am sorry to say, I have been always left in the minority, when several German physicians were present.

Milk, as an article of diet for the consumptive, is usefully combined with farinaceous substances, such as bread, Turkey wheat, vermicelli, macaroni, semolina, grits, buck wheat, rice, &c. or any pure starch, such as tapioca, arrow root, sago, &c.

and these may be varied according to the peculiar stomach or taste of the individual. It is, I suspect, heresy to say any thing in this country against potatoes; but I certainly do think, that unless they are most completely deprived of their natural juice, and which is seldom the case except in Ireland, they are often an unwholesome article of diet. Where milk does not agree, and a solid diet of animal food excites too strong an exacerbation of fever, animal broths and soups may be substituted. The pork broth of the eccentric, but successful Marryatt, agrees with many; and some very remarkable recoveries from phthisis have been effected by a combination of fresh animal fat and milk, especially the fat of mutton. Whether these cases were all of them of the tubercular kind is doubtful. The remedy is an old popular one in England; and the prescription consists in boiling down a quarter of a pound of mutton suet in a pint of milk, to be taken daily. Several cures have been said, at different times, to have been effected by this simple remedy. One of the best authenticated is narrated by Dr. Young, whose testimony will not be called in question. "The patient, a man," says Dr. Young, "had been a waiter at

Portsmouth, and came to London with hæmoptysis, and an expectoration decidedly purulent, and a well-marked hectic: he obtained partial relief from some medicines I recommended him; but when he went into Northamptonshire I never expected to see him again; he, however, returned in a few months, free from his cough and his hectic, and told me, that besides the medical means which I had directed, he had constantly taken his milk and suet, and had, in the mean time, gradually recovered his health and strength." *Young's Treatise on Consumptive Diseases, pp.* 79, 80.

That this kind of diet cannot be generally employed need not be told, for few stomachs can overcome this quantity of animal fat; but when it can be borne and digested, I should deem it a very useful assistant, and it may always be tried.

Tubercular phthisis is sometimes associated with other diseases, and this always renders it more difficult of treatment and more fatal.

It is now and then accompanied by chronic hepatites, at other times by an habitual overflow or flux of bile: in some instances with syphilis, with rheumatism, with scorbutic habit.

All these are unfortunate complications, for this obvious reason, that the remedies which are the best calculated to overcome the first of these indispositions are all of them apt to produce purging or perspiration, events to be most sedulously guarded against in this, as well as in most varieties of consumption.

In bilious habits, in hepatitcs, in syphilis and rheumatism, mercurial medicines are, of all others, those which do most real service; but their administration is very difficult in phthisis; not that the medicine is contrary to scrophula, as has been stated more than once, but because it is very difficult to prevent its running off by the intestines, and producing colliquative diarrhœa.

Should any symptoms of syphilis appear, mercurial ointment must be employed in preference to all other preparations. Mercurial action, and indeed salivation, have, in some few cases, been known to put a stop to phthisis, and to have laid the foundation of a perfect cure.

During the employment of this remedy, the tar vapour, and the internal medicines already recommended, may be continued.

The cure of rheumatic affections in general, especially of the chronic kind, when combined

with any variety of phthisis, but especially by tubercular phthisis, is best obtained by means of a saturated decoction of sarsaparilla and the stipet. dulcamaræ, adding some muriate of lime, or the subcarbonate of soda. This complication of rheumatism and phthisis does not naturally admit of strong diaphoretics, nor of purging, nor of the internal use of mercurials; but on the other hand, conium, opium, aconitum, and the rest of the narcotic tribe, do good in such cases, either combined with or given at separate times from the sarsaparilla. *See Formula* 13.

Phthisis tuberculosa, which has arisen after the sudden disappearance of pustular or ichorous eruptions, is recommended to be treated by the producing fresh eruptions by external irritants and sulphur baths; but in the few cases which I have seen, when I suspected what is called the repelling of such diseases to have been connected with consumption, I have trusted entirely to the sarsaparilla with dulcamara in concentrated doses, and to issues, if the consumption was advanced; or if in the beginning, I have usually joined antimonials, especially the kermes mineral, with the other remedies. Such cases, however, are in general very hopeless.

This chapter might be swelled out to a greater length, by entering into minute details on every kind of possible complication; but after the general rules which have been laid down, it seems quite unnecessary, especially to such as are possessed of practical talent.

CHAPTER III.

On Pulmonary Consumption, arising from Hæmoptysis, or Hæmorrhagy from the Lungs; its Prevention and Treatment.

Spitting of blood, accompanied by cough, may arise from a great variety of causes, some of which are of the most opposite kinds, and of very various degrees of danger. All of them, even the least dangerous, produce, in general, great alarm in the mind of the patient, especially on the first attack.

Hæmorrhage from the lungs is in the first place either accidental, or it is constitutional and idiopathic, or it is a merely symptomatic complaint.

Every person is exposed to the first; a peculiarity of make and constitution determines to the second; and a variety of diseases give birth to the third.

External violence, of every description, may produce, as is well known, accidental hæmorrhage from the lungs; such as a violent blow on the chest, a fall from a horse, or from any other

height, any sudden and violent concussion of the chest or whole body, a puncturing wound, a violent and long-continued act of vociferation, &c. Some of these, such as blows and concussions, produce a sudden extravasation of blood into the parenchyma of the lungs, and all the phenomena of M. Laennec's pulmonary apoplexy, and that frequently of the most fatal kind.

There is only one truly idiopathic hæmoptysis, and in some respects it might be called symptomatic, I mean that arising from malconformation of the chest: all the others are symptomatic, either of tubercles, or of sub-inflammation of the mucous membrane of the bronchiæ, or of varicose veins in the same, or of asthma, or some organic disorder of the heart, or of hæmorrhoids, &c.

But although it happens that some cases of idiopathic hæmoptysis, as well as some of those which are symptomatic, destroy the patient by producing what M. Laennec has called his pulmonary apoplexy; yet many other cases do not do so, but terminate, either in a gradual return of health, after some relapses, or they end in quick spreading ulceration, giving birth to one of the worst cases of purulent phthisis.

A too narrow and contracted thorax seldom

produces any serious inconvenience until the body has nearly acquired its greatest growth. The wants of the constitution, by employing the superfluous nourishment, prevent any extraordinary fulness or distention of the blood-vessels; but, when growth ceases disproportionately, and the cavity which contains the lungs is straitened, and too small in regard to the stature of the person, from that moment the lungs are constantly overcharged with blood, and in a plethoric state; and hence it happens, that very slight occasional causes, such as too warm a room, mountain air, an over-exertion in speaking or singing, produce a sudden effusion of blood into the parenchyma of the lungs, and an hæmorrhagy of the most dangerous kind. The appearances on death are described by Laennec.

Every physician who has been much employed in the active part of his profession must, I think, have observed three distinct modes in which this hæmorrhage proceeds. Either it springs at once from the fatal congestion, so well described in Laennec's dissections, and destroys by suffocation, owing to the great quantity of blood which suddenly fills the trachea; or, secondly, the congestion not having been extensive, is in a

great degree relieved by the loss of blood, and the remedies employed, and ceases for a time, yet returns, in general, at longer or shorter intervals. Of these cases, the greater part die exhausted, with or without supervening dropsy: a very few of these, after one or more attacks, recover and live in delicate health for a number of years. The third and most common way is, that of inflammation; the coagulated blood in the parenchyma on the one hand, and accidental causes on the other, producing this effect, which is soon followed by ulceration and a rapid consumption.

The presence of a great number of tubercles acts on the same principle as malconformation of the chest. These bodies impede the circulation of the blood, and by compressing numberless blood-vessels, throw too great a load on the rest of the lungs.

M. Laennec, in the work alluded to, has given us very just notions of what takes place in such cases. He found one or more places of the lungs indurated. This induration, he says, is always partial, and does not occupy a considerable portion of the lungs; its more ordinary extent being from one to four cubic inches. "This morbid affection," he says, "is evidently produced by an

effusion of blood into the parenchyma of the lungs, or into the air cells. From its exact resemblance to the effusion of blood that takes place in the brain in apoplexy, I have though the name pulmonary apoplexy very applicable to it."

In another part, he continues, "The hæmorrhagic induration of the lungs is as easily distinguished from the congestions that take place after death, as from the alterations produced by peripneumony. The sanguineous congestions of the dead body consist of an accumulation of blood intermixed with serum, often spumous, which flows plentifully on an incision of the part, and tinges the lungs of a livid colour. Being the mere consequence of gravitation, the engorgement is found most considerable in the most depending part of the lungs, and gradually lessens towards the superior parts: where most engorged, the part still retains some crepitation, and the incised surfaces are never granulated even when the congestion is so great as to destroy the spongy character of the lung. By washing, we can, in every case, remove all the blood, and restore the lung to that sort of flaccidity which it possesses when compressed by a pleuritic effusion. The engorgement of the

hæmoptysis, on the contrary, is accurately circumscribed, very dense, dark red, or brown, granulated, and almost dry when incised, and grows pale by washing, but without losing any part of its consistence." *Page 64 of Translation.*

If malconformation and tubercles meet in the same subject, which is often the case, the propensity to hæmorrhagy from the lungs is necessarily increased, and its fatality also augmented.

A third kind of active hæmorrhagy happens to the grinders of needles, flax-dressers, and stone-masons, and this almost always terminates in ulceration.

Of the passive kinds of hæmoptysis, that from varicose veins of the mucous membrane of the trachea and bronchiæ, and which is commonly supposed to be symptomatic of hæmorrhoidal congestion, is one of the most frequent, especially in Russia, where the disease is common.

Other passive hæmorrhagies from the lungs may arise from a variety of causes, such as chronic bronchitis, a diseased liver, and diseases of the heart; but as almost all these cases continue to preserve the hæmorrhagic character, and are generally chronic and periodic, and seldom or ever terminate in true phthisis but from

neglect or bad treatment, I do not deem it necessary to treat of any of them.

The acute and most dangerous cases of hæmoptysis are ushered in by more or less anxiety, and a feeling of oppression; by alternations of heat and cold, and at last by a regular accession of fever, and necessarily by cough. The blood which is coughed up is always florid, and is either very pure or frosty. The pulse remains quick from the first accession of the febrile paroxysm, and is in general full and hard, except in some debilitated habits, or in those who have been chilled by cold applications.

When it arises in young people of narrow chests, long necks, and who have every sign of malconformation, it is generally copious, and sometimes suffocates the patient on the first attack. If it does not do so, it returns at uncertain periods, and at last destroys the patient by mere exhaustion, and by the gradual destruction of the lungs, owing either to fresh infusions of blood into their parenchyma, or by ulceration, or by giving birth to a rapid increase of tubercular disorganization.

In hæmoptoe, which is merely symptomatic of tubercles previously existing in the lungs,

the disease terminates almost necessarily, and certainly most commonly, in purulent phthisis.

A narrow and contracted chest may be greatly improved before growth is completed. The amendment may be carried on for several years, both before and after the age of puberty; but to be effective it requires unceasing constancy, such as is very seldom met with, though often promised.

Mr. Autenrieth is, I believe, the first who recommends the practice. Like all kinds of malconformation, it is only to be corrected by mechanical means, attending at the same time to the constitution of the patient. Mr. A. advises the patients to place their hands on some solid support, and to exercise themselves by taking repeatedly deep inspirations. He cautions the patients against the carrying this so far as to produce pain.

The principle is right, but the practice requires a degree of caution in the execution, which few young people can command, owing to their natural liveliness and thoughtlessness.

The object is to enlarge the capacity of the thorax, by gradually rendering the lungs more distended and voluminous; but the exercise re-

commended of filling the lungs frequently as much as possible, is very hazardous in young people disposed to hæmoptoe, not only on account of the natural weakness of the blood-vessels in this class of patients, but also on account of the chemical change produced in the blood when more air than the health of the patient requires is forcibly and frequently introduced into the lungs.

When Mr. A.'s method is practised with great moderation, and with unremitting constancy, it may do good. It may enlarge the volume, and strengthen the lungs, and bring them into a better balance with the rest of the body.

There is another exercise which is less dangerous even in the excess, and which contributes to produce the same effect; I mean the exercise of the arms in such a manner as to make the pectoral muscles act with considerable force on the ribs, that is, by throwing the arms frequently back, or by being drilled and exercised like a young recruit, whose chest wants to be opened, and whose shoulders require to be dressed. The hands may be loaded with dumb-bells of a light weight; but all great exertions, or any action too long continued at a time, is always attended with some danger in the cases alluded to.

Need it be mentioned, that young people of the unfortunate conformation alluded to ought to be watched at their studies, so as to prevent the habit of stooping and bending over their book or work, a habit to which almost all children are prone?

The best posture to be observed while reading, with a view of opening the chest, is, perhaps, to make the patient recline in an almost horizontal posture, with the legs hanging down on the floor. They ought to be taught to fill the chest, from time to time, by means of a full inspiration. The natural motion of the arms, while walking, tends to expand the chest, and hence the necessity of urging this kind of exercise several times a day.

In young women who have attained the age of puberty, but who are not quite regular, if affected with any periodical sign of turgescence, such as headach, oppression, and a sense of fullness in the chest and head, with a full and agitated pulse, a small bloodletting from the arm, or the taking away blood by leeches from the hæmorrhoidal vessels, sometimes relieves the patient from all the distressing feelings which now and then precede hæmoptysis.

All people having flat chests, high shoulders,

long necks, and all the known signs of disposition to pulmonary hæmorrhagy, ought to be very warmly dressed; for any degree of relaxation or weakness which this kind of clothing may produce, in peculiar constitutions, is much less dangerous than the effects of a chill or sudden cold on the surface of the body, or of keeping the extremities habitually cold.

It would be difficult to adduce an instance of a strumous or scrophulous habit, either engendered or increased by any weakness which warmth produces, provided the person enjoys good air, wholesome diet, and due exercise; but every day's experience shows the physician that cold constantly acting on the skin may produce, and most certainly does increase, scrophulous action and scrophulous depositions.

Timely precaution may save the life of many a weakly child. I have known many instances of constitutions the most delicate, and as far as human judgment authorizes us to say, disposed by make and inheritance to consumption, so much improved by a long residence in mild and temperate climates, as to get entirely the better of their constitutional infirmity; for although the original conformation of the body has not been

completely corrected by this, it has been improved, and the energy of the skin having been kept up for years, the whole vascular system has been brought into a healthier equilibrium, if I may be allowed to use so familiar an expression.

When the circumstances of the family permit it, young people of the make alluded to ought to be sent, at an early period of their life, to Italy, the south of France, the south of Devonshire or Cornwall, &c. and allowed to remain there for many years, except during the summer, when they might, if necessary, leave these countries for any other; and here I find it necessary to guard myself against all false criticism, on the ground of my having declared the greater number of places in the south of France, and many in Italy, as noxious to the consumptive. There is a wide difference between the correcting a predisposition to any given disease, and the cure of the same when once it has broken out. A very pure air is a bad remedy for ulcerated lungs; but if habitually warm and constant, it may be most beneficial to consumptive constitutions, before tubercles are formed, inflamed, or ulcerated.

At all events, it must be evident that there is no chance of correcting the predisposition to such

hæmoptysis as arises from malconformation, but on the principles already laid down.

In regard to that which arises from tubercles, I have to observe, that the first set of experiments which were made with boiling tar soon convinced me that it was inadmissible in such cases, for it evidently increased the disposition to hæmorrhagy. I suspected, at that time, that the vapour was too powerful a stimulus to lungs overloaded with blood; but I begin to suspect that the evil did did not arise solely from any quality of the tar, but also from the heat and dryness of the air, occasioned by the constantly burning a lamp in the apartment of the sick. The temperature of the vapour itself, when first disengaged in any apartment, and the constant operation of the lamp, not only heat and rarefy, but also dry the air too much for patients who are disposed to pulmonary hæmorrhagy.

The dryness of the air can be easily remedied by artificial means; namely, by either letting in a small portion of steam, or by spontaneous evaporation from wetted sand, or by sprinkling the apartment with water, &c. The first might be advantageously employed as a vehicle for various vegetable matters to be breathed, but it has the

great inconvenience of contributing to raise the temperature of the apartment too much, the steam naturally giving out much of its latent heat on condensation.

As to the medical means to be employed when the hæmorrhagy takes place, the uniform practice of the greater number of physicans, of all countries, has been nearly the same. It consists in attempting to produce a diminished action of the heart and arteries by cold externally applied, by bleeding, by cooling purges and laxatives; and to arrest the hæmorrhagy by astringents, such as the infusion of rose leaves, with sulphuric acid, alum, and in some cases the employment of superacetate of lead, and astringent extracts, &c.

The greater part of this treatment is irrational and hurtful; yet such is the effect of precedent and authority, that I am fearful that in pointing out the very erroneous principle on which it is founded, I shall not only fail to convince, or induce many to adopt another method, but shall expose myself to much criticism: for, to confess the truth, it seems natural to suppose that the heart and vascular system should sympathise with the skin, and that torpor and diminished energy of the one should be followed by a similar state in the other.

The beneficial effects of cold air and cold applications to the skin in many other hæmorrhagies is unquestionable, as, for instance, in epistaxis, and many cases of menorrhagia, therefore a similar practice in hæmoptysis seems to be justified by analogy; and hence we find that a patient, as soon as he is seized with hæmoptoe, is exposed not only to cold air, but cold applications, such as iced water and vinegar, are applied to his face and temples, and to his hands, wrists, and legs.

By this means the patient is soon chilled, but still the hæmorrhagy does not cease. On the contrary, the heart and lungs are more loaded with blood than before, the respiration is hurried, and the patient labours under an increased flow of blood, together with additional cough, oppression, dyspnœa, and anxiety.

Can it be a matter of astonishment, to any one who reflects on what takes place in the lungs in this disease, that the hæmorrhagic congestion should be increased under this treatment? I confess that I had not a very accurate idea of the diseased affection until the publication of Mr. Laennec's* book; but it is several years since I relinquished the practice I am blaming, and since I adopted a very opposite one, that is, of

bringing back the circulation as quick as possible to the skin, so as to relieve and unload the lungs, and I certainly have found this method more successful.

This method does not consist in heating the apartment of the patient, for this would be evidently injudicious, inasmuch as the air which the patient breathes ought to be as cold as possible. Cold may be applied to the lungs, and consequently to the bleeding vessels, with advantage, but most assuredly with no advantage if applied to the skin.

The feet and legs of the patient ought either to be put in warm water, or wrapped up in some warm woollen dress; but the head, neck, and chest may be left exposed to the cool air. I do not allow the hands to be cold; and as soon as the circulation is free in the extremities, I cause the patient to be copiously blooded, provided he be of a tolerably strong constitution. A full bleeding is always useful; but I presume I need not remark that the loss of eight or ten ounces of blood is as full a bleeding to many as twenty ounces would be to others.

The next thing to be done, and which yields the most service, is to apply a blister on the sternum, and another on the back, and instead of

giving alum or mineral acids, especially the sulphuric acid, and an infusion of rose leaves and other astringents, I give a combination of the nitrate of potash and of the sulphate of magnesia every two hours, until one or two loose stools follow. After which I trust very much to emollient drinks, and such doses of the nitrate of potash and cream of tartar as the patient's stomach can bear.—*See Formulæ* 17, 18, 19.

This plan, I take it upon me to assert, is more generally successful than that which consists in the application of cold and astringents, and moreover it has the great advantage of diminishing the disposition to inflammation, and consequently to ulceration, which the other method certainly promotes.

If the physician takes care to keep in mind the nature and local agency of the extravasated blood in the parenchyma of the lungs, it is scarcely possible he can go far wrong in his treatment of the disease.

The great objects to be obtained are, first, to prevent further congestion and extravasation; secondly, to diminish the tendency to inflammation, which the presence of the coagulated blood in the substance of the lungs may easily excite, if combined with other agencies; and, thirdly,

to promote the absorption of the effused blood, and consequently the resolution of the induration.

All the remedies which have been hitherto recommended are directed against the first and second of these objects. We shall soon pass to the consideration of the others.

All practitioners concur in the necessity of bloodletting, and most do so in that of blistering, whatever be the other means employed; and there is no doubt of the necessity and general utility of these powerful remedies, provided the bloodletting be not carried so far as to diminish the strength and vitality too much, for in this case there is danger of asphyxia.

Every good remedy is apt to be abused, and bloodletting has had its full share of this injury, not only in this but in many other diseases. As the momentum or force of circulation of the blood can be overcome in most instances by any great and sudden loss of this fluid, it seems quite natural to suppose that copious and repeated bleeding should not only allay but also prevent hæmoptysis. That it almost always diminishes the violence of the hæmorrhagy must be allowed; but I refer to the impartial results of experience to say whether hæmoptysis does not often recur

in a very short space of time after the most copious bloodletting which is usually performed, and also whether partial hæmorrhagy, or coughing up of some blood, does not continue, notwithstanding repeated bloodletting for many days together. I suppose every other additional assistance to have been employed, such as the lowest diet, and judicious medical treatment in general.

This ought not to surprise us, if we reflect seriously on the state of the lungs; but it ought to admonish us to be less lavish of blood, which, after one or two bleedings, often does more harm than good.

Until the blood which has been effused into the parenchyma of the lungs is removed by absorption, the patient will always cough up more or less blood, should the practitioner not have left him more than a few pounds in his body; and by pushing the bleeding too far, infinite harm is often done by weakening the powers of absorption.

Hæmoptysis, arising from such causes as have been mentioned, if not fatal on the first attack, is generally so by recurring frequently, because a real phthisis is at length established. A few only escape, especially if the chest be very narrow and flat.

In some cases of recurrence of hæmoptysis, it has appeared to me that much good has been obtained both in allaying the cough and the disposition to hæmorrhage, by exhibiting moderate or rather small doses of the pulvis ipecacuanhæ compositus. At the same time that this is given, the bowels are to be kept open by any of the neutral purging salts, either alone or combined with the nitrate of potash; and this has the advantage of permitting the practitioner to give the *pulv. ipecac. comp.* with more freedom, and for a longer period, without the risk of producing an inflammatory diathesis, which it is otherwise apt to do. —*See Formulæ* 20, 21.

When I suspect the effusion in the parenchyma of the lungs to have been extensive, I seldom exhibit this remedy until the heat and febrile symptoms are subdued; and then, when given with great caution, it appears to do good, and to support nature during the work of absorption. In such cases I give the pulv. ipecacuanhæ compositus at bed-time, or perhaps twice in the evening, and the sulphate of magnesia, with or without the nitrate of potash, in the morning, so as to procure one or two stools.

If astringents are continued, with a view of preventing the return of hæmoptysis, the dyspnœa is generally prolonged, and a new attack of hæ-

morrhage accelerated, the action of the heart acquiring too much strength from these medicines.

If the patient be of a delicate and weak constitution, the Iceland moss is often necessary to support his strength, and a stronger tonic than this cannot easily be borne, while any oppression and dry cough remain.

The action of the absorbents is best excited by very minute portions of mercury and ipecacuan: opium, cicuta, hyosciamus, and digitalis, I often give at the same time, to allay irritation and the frequency of the cough. Squills, gum ammoniac, or any of the gum resins which act as expectorants, I seldom employ, as they often do harm. In a few cases I have observed the disposition to hæmoptysis to be increased by ipecacuan.

A milk diet, if the stomach can bear it, or if not, any very light mild nourishment, is necessary. These, and a mild climate, with gentle exercise, are generally sufficient to prevent the return of the hæmorrhage, where the disposition to it is not very great, or where tubercles are not present.

When the disease arises from tubercles, the same general principles, and the same means are to be employed for checking the hæmorrhagy; and for the treatment afterwards, I have ge-

nerally guided myself by the observations made in the preceding chapter.

To those who are subject to periodical hæmoptysis, periodical venesection, and cooling purges, are the best preventatives, together with an abstemious and mildly nourishing diet, and equal temperature in the autumn, winter, and spring, or at least a sheltered situation from all high winds, especially those which blow from any points of the compass between due east and northwest, for the reasons already assigned in the chapter on climate.

It has been remarked, that the passive hæmorrhagies seldom lead to phthisis, except from neglect or bad treatment, and they do not therefore form objects of discussion at present. All that is necessary to observe concerning them is, that they admit of the use of astringents from the beginning, combined with saline purges, blisters, and remedies which must necessarily vary much, according to the disease with which the hæmorrhagy is connected, and the constitution of the patient who is subject to it.

There are among the minutiæ of practice certain rules which appear so self-evident as to justify their being passed over in silence by systematic writers, and yet some of them are of im-

portance, and do not always occur to a very young practitioner. Among these is the rule, in all hæmorrhagies from the lungs, especially active hæmorrhagies, to observe as much as possible an upright posture of the body, both by night and day. The patient ought to sleep in an high-backed armed chair, with his feet extended when he grows tired of letting them hang down. The observing the greatest possible silence is also another essential rule. The patient ought not to speak: he ought to endeavour, as much as is in his power, to subdue the cough by his will, or resist the habit of coughing from every slight irritation about the fauces or trachea. In active hæmoptoe, every thing the patient eats and drinks ought to be cold, and scarcely any animal food ought to be allowed until convalescent, and even then sparingly. In this respect, as well as in the principal medicines, the treatment of this complaint differs essentially from that of tubercular phthisis.

CHAPTER IV.

Practical Observations on that Variety of Consumption which arises from neglected Peripneumony, or acute Inflammation of the Lungs, and its Treatment.

This is a common disease among certain classes of labourers in Great Britain, those especially who, from the nature of their employment, are exposed to great and sudden vicissitudes of temperature, and those also who are exposed to the constant inhalation of mechanical stimulants, such as needle and scythe-grinders, flax-dressers, stone-masons, &c.

Among the rich, and those who are in easy circumstances, it is met with occasionally among officers in the navy and army, those who indulge in severe exercise out of doors, in cold and boisterous weather, and those who are exposed to such weather while the body is at rest, such as all travellers in open carriages, or on the outside of these.

In Russia, this disease is very rare among the peasantry compared with the labouring classes

of this country; the fur dress of the Russian being a guarantee against the bad effects of any sudden transition of temperature; but the disease is more common among the military of that empire, and among certain votaries of fashion.

M. Laennec seems to think that the termination of peripneumony in vomica or abscess is a very rare event; for he says, "In several hundred cases, wherein I have examined the lungs after death, I have met with collections of pus in the inflamed organ not more than five or six times. These abscesses were few in number, and inconsiderable in extent," &c.

It is by no means easy to reconcile this observation with the results of practice, for most assuredly more than the half of the cases of *real* peripneumony which are neglected above a week, reckoning from the very first attack, terminate in abscess, which either destroys the patient on the moment of its bursting, or terminates in rapid phthisis. Nor is it easy to guess what could have destroyed the hundreds of subjects who had laboured under peripneumony, and whose bodies were examined by M. Laennec, if the disease had not ended in this manner.

The result of M. Laennec's numerous dissections seems to have convinced him that when

peripneumony passes to a state of suppuration, the pus is formed in the vessels or parenchyma, for he positively asserts, that the tissue of the lungs is not broken down. "Peripneumony," says that distinguished anatomist, "even when it has reached the third stage, or that of purulent deposition, may still admit of cure *without disorganization* of the pulmonary tissue." And in another part he assures us, that when the lungs are cut into, in those who die in the third or suppurative stage of the substance of the lungs, they are found of a granular texture, but of a pale or straw colour, discharging from the cut surfaces, in considerable quantity, an opake, yellowish, viscid matter, which is evidently purulent, but with a heavy smell, which is not so disagreeable as that of pus in an open wound. This is properly speaking suppuration of the substance of the lung. *See page 46 and 50 of the Translation.*

This is really almost quite irreconcilable with what is commonly witnessed in advanced and neglected peripneumony; for on its terminating in suppuration, the patient, after labouring some days under a sense of oppression and dyspnœa, is suddenly seized with a fit of coughing, and commonly discharges in a very short time from a

quarter to about half a pint of pure pus; and in every case where I have inspected the lungs of such people, I have found an ulcerated cavity which had contained the purulent matter.

The anatomical distinction of three degrees of inflammation of the substance of the lungs, which that celebrated author points out, are of little value to the practical physician. In all cases of real inflammation of the lungs, the practice is clear, simple, uniform, and almost always, I might indeed say always, decisively successful, when employed in time, and when not counteracted by want of care and obedience on the part of the patient, or by such accidents as could not be foreseen or prevented.

There is no fixed period, as may easily be conjectured, for peripeumony's terminating in suppuration. In one case, if the patient's testimony, as to the commencement of his disorder, was to be relied on, it was formed in less than thirty hours, and the abscess burst on the beginning of the third day. On the other hand, many cases of peripneumony are curable by means of blood-letting, low diet, and confinement in one temperature any time before the end of the fourth day, but beyond that, it is very doubtful what may have occurred. It is

clear, that the extent of the inflammation, the peculiar constitution of the patient, and his diet and conduct during the disease, must vary this almost *ad infinitum.*

Physicians of all ages, from the earliest to the present times, have called abscesses in the lungs, arising from peripneumony, by the name of *Vomica;* but as M. Laennec confines this appellation to the cavities formed by softened tubercles, and as the word in itself is unmeaning and absurd, it is of no other importance to retain it except to prevent circumlocution.

Dr. Cullen has not admitted the old established distinction between peripneumony, or inflammation of the parenchyma of the lungs, and pleurisy, or inflammation of the pleura; and in a practical point of view, especially in the commencement and first stage of the disorder, it is in reality of no moment to lose any time, either in ascertaining the seat of the inflammation, or in disputing about it, the treatment being the same in both complaints. But the progress of the suppuration in the two diseases, although difficult to be distinguished, has very distinct and different effects in the mode of termination; for the suppuration of the lungs, arising from pleurisy, never ends in

phthisis, as far as my experience goes, while that of peripneumonia seldom fails to do so.

I have seen several cases where a whole lobe of the lungs was almost entirely reduced to pus, and yet, where no expectoration of the fluid had occurred; nor is this to be wondered at, when it is considered that the destruction of the lungs, by suppuration which commences on the pleura, is constantly preceded in its progress by infiltration of the parenchyma, and by complete compression, if not obliteration, of the air cells and ramifications of the bronchiæ. In the progress therefore of this inflammation from the surface of the lungs inward, there is no possibility of the pus emptying itself into any of the larger branches of the trachea; whereas in peripneumony, which terminates in abscess, the pus being confined in a bag in the very substance of the lungs, although equally accompanied by infiltration into the parenchyma, spreads, at last, until it reaches some of the larger branches of the bronchiæ, into which it naturally must burst, in consequence of its meeting with less resistance at that point.

The formation of any quantity of pus in pleuritis is generally the cause of the destruction of the whole lobe of the lung, where it is not let out

by an opening made between two of the ribs; and indeed, in young scrophulous patients, it is astonishing how soon the whole lung of any one side may be entirely destroyed by suppuration from neglected pleuritis.

When an abscess happens to follow neglected peripneumony, its progress is generally equally quick, but it is limited, and as soon as it bursts into any of the larger branches of the bronchiæ, and does not destroy the patient at that moment by suffocation, the symptoms of confirmed phthisis take place immediately, and then the destruction of the lung goes on much more slowly than when it occurs from suppuration after pleurisy. Still this variety of pulmonary consumption is of a rapid kind, compared with tubercular phthisis.

To say any thing on the means of preventing this kind of phthisis is surely quite superfluous. Those who are the most exposed to it have not unfortunately either the time to read instructions of this kind, or the possibility of avoiding at all times the exciting causes of the disease. Those of a higher class ought to have sufficient intelligence to avoid exposure to cold at improper seasons, or when insufficiently clothed.

The cure of a large open abscess in the lungs

is at all times an uncertain, and most generally an unsuccessful task; but in good sound constitutions, nature alone with very little assistance, when judicious, has re-established the health of several, where the vomica has not been very large. In most cases it requires a different kind of treatment from the vomicæ, or abscesses which occur as a natural event in tuberculous lungs.

In a great number of cases it is connected, from the nature of the exciting cause, with hepatitis; in others, with rheumatism: but without entering into the minutiæ of its various complications, it may be remarked, that in regard to general practice, the patients who become consumptive in consequence of neglected peripneumony are usefully divided into two classes; those who have tubercles already formed, and those who are entirely free from them, or from any scrophulous disposition, except it be such as is common to most of the inhabitants of cold climates.

The treatment of open abscesses in the lungs, accidentally excited in those who have tubercles, does not require any other rules or remedies than those mentioned in the preceding chapter. But the purulent phthisis, arising from neglected peripnemony, in people otherwise of a good con-

stitution, differs in many respects from this, and requires to be treated with fully as much judgment, although it be more constant in its symptoms and character.

In the first place, it may be observed, that as soon as a large vomica bursts, the worst symptoms rapidly succeed each other; and in a very short period the patient is reduced to the lowest ebb of life, by the great quantity of pus expectorated, by profuse night-sweats, and colliquative diarrhœa. I have often been surprised at the rapidity with which these symptoms come on; for I have known an abscess of the lungs, formed in consequence of neglect on the part of the patient, where the constitution had suffered very little before it burst; but no sooner did this event take place, than all the bad symptoms followed rapidly. The antimonial medicines, and combinations of these with some of the preparations of mercury, which do so much good in some cases of tubercular phthisis, are inadmissible in this variety of phthisis, except in one instance which shall be mentioned. Narcotics also, which diminish nervous sensibility, and attack the vital powers in too great a degree, are hurtful, for this simple reason; that if the cough be too much diminished, while the quantity of purulent matter

in the abscess is great or quickly formed, the confinement of the matter is equally detrimental as it would be in the instance of any other abscess. In moderate doses, however, narcotics, and especially opium, do good.

The frequent hacking cough of patients who are affected with tubercular consumption is always diminished with good consequences to the patient by narcotic medicines, except when a tubercular vomica has burst, or found its way into the air cells, because the cough is incapable, on the one hand, of relieving the lungs from the irritating cause (tubercles), and, on the other hand, the disorganization of the lungs is increased by its frequency. But in the case of an abscess of the lungs, from neglected peripneumony, the cough never occurs but to relieve the lungs from some of the purulent fluid contained in the vomica, and which, by its mere mechanical pressure, does harm. It is in reality, in this instance, an effort of nature to get rid of the offending cause. The hydrocyanic acid, therefore, cicuta, hyosciamus, and even opium, if given in large doses, by paralysing the lungs to a certain degree, and consequently allowing an over-accumulation of pus in the abscess, produce a most indescribable degree of

anxiety and oppression; and if exhibited in such a manner as not to diminish nervous feeling, it is clear they may be as well omitted altogether. The only circumstance which induces me to give opium or other narcotics, is when the patient is of a nervous temperament, the frequency of the cough being as much kept up by the sensibility of the nerves as by the pus.

The remedies which do most good in this variety of phthisis are dry vomits, issues in the side affected, certain pectoral stimulants, and mild tonics, exercise as much as can be borne, a diet suited to the individual, and, above all, as the most powerful and useful agent, an atmosphere charged with the vapour of tar.

The hope of the physician is founded on the smallness of the abscess, on its particular seat in the lungs, on its being unconnected with any other disease, and on the age and constitution of his patient.

The first and last of these circumstances require no comment. In regard to the second, it is clear, that if the abscess be in the lower lobes of the lungs, it must require great efforts of coughing to be expectorated, and in proportion as the patient loses strength, this becomes an increasing source of evil. If the abscess has formed

a very small communication with the bronchiæ, the same bad effects follow, especially if the abscess itself is large.

An abscess in the lungs, as an effect of accidental inflammation, may be complicated by the various constitutions which are known and acknowledged. It would, however, be a tiresome task to enter into the history of a vomica, complicated with syphilis, rheumatism, gout, and scurvy, &c. Every medical man who has studied his profession profoundly, or has had much experience, must know how these circumstances modify the general rules of practice. But one of the worst and most frequent complications of peripneumony, and which greatly embarrasses the treatment of an abscess arising from it, is hepatitis, and what is commonly called a bilious habit.

The causes which excite peripneumony frequently occasion inflammation of the liver at the same time. Abscesses in the lungs and liver of one and the same individual have been often detected on dissection, and finally, abscesses of the liver have frequently worked their way through the diaphragm into the lungs. The usual symptoms of hepatitis accompany the disease; of its treatment I shall say something by and by.

To return to the cure of cases which are not complicated, emetics are usefully employed soon after the bursting of the abscess. They greatly assist in the evacuation of its contents, by the mere action of the diaphragm on the lungs, and they promote the absorption of what remains. The necessity of frequently repeating the operation of emetics, is to be judged of entirely by their effects. Their employment ought never to be insisted on, as is frequently done, upon mere system. If all the symptoms are relieved for twenty-four hours, more or less, after the emetic, it may be repeated. If it does not diminish the cough and symptomatic fever, but, on the other hand, produces an increase of sweat, or a diminution of appetite, it is to be abandond entirely. An emetic of ipecacuan and tartarized antimony, which is an useful combination, is now and then followed in consumptive people by a few loose stools. This is always an unpleasant and injurious effect, but if the other symptoms are relieved, it is not a sufficient motive for abandoning the remedy; for a few drops of laudanum, taken immediately after the operation of the emetic, generally prevent the evil, and almost always calm and soothe the patient.

An atmosphere charged with the insensible vapour of boiling tar is to be employed as soon as possible, and at first in a very diluted state. In most cases in which I have tried it, it has produced the most decided benefit, acting as a salutary stimulus to the ulcerated surface; but the same caution is required here as in all cases in which this stimulating atmosphere is breathed. I mean not to apply it until the atonic stage of the disease is established.

In this variety of phthisis it is not absolutely necessary for the patient to remain exposed day and night to the vapour, but he ought to breathe it at first two or three hours at a time, provided it does not produce any pain in the chest or tightness of breathing, or a dry cough. These events only occur in very inflammatory constitutions, and they always denote that the vapour, however moderate in force or concentration it may appear to be, is yet too strong for the individual who has such symptoms following its use.

Should any pain in the chest, or increase of cough, and deficient expectoration occur, the inhalation of the vapours of a decoction of anise seeds, marshmallow flowers, with poppy heads, and a little chamomile flowers, soon relieves the

symptoms, and re-establishes the too suddenly arrested suppuration.

Such cases are rare, but when they do occur, it is then a judicious practice to employ antimonial medicines for a limited time. The *decoctum hordei compositum,* or any other mucilaginous diluent, with very small doses of the solution of tartar emetic, is the best remedy for taking off the inflammatory tendency.

When the suppuration is once re-established, the vapour of tar ought again to be had recourse to, but in a very diluted state, while there is any disposition to active inflammation. The state of atony is sure to come on in the progress of ulceration, and it is better to anticipate this a little than to lose any valuable moments by deferring, for too long a period, the use of the tar vapour.

The next remedy of importance, in the early stage of this variety of consumption, is an issue made either by incision, actual cautery, or caustic, between any two ribs nearest the seat of the abscess.

It is of great importance to establish this external ulcer as soon as possible; for, in fact, it seldom does good when debility is great. Before the strength of the patient is broken down, therefore, an issue, which is capable of containing

from four to six peas, ought to be made. Some prefer setons, on account of the difficulty of keeping a pea issue open on the chest. The physician and patient may settle it between them, some attaching great importance to the one in preference to the other, any other reason for which I cannot comprehend, except the greater ease with which the ulceration is kept up by a seton on the side.

Some medical men, and especially some French physicians of the present day, seem to think that there is greater benefit to be derived from the burning their patients with a red hot iron, than by making an incision with a scalpel or seton needle. I have not the smallest faith in this very painful and cruel mode of making an issue. It is the suppuration, when once established, which in either case does the chief good.

When the force of the constitution is much reduced, as in the last stages of the disorder, issues, like all other evacuations, not only fail in general to do good, but in reality do harm. There are, however, plenty of anomalies of all kinds in medicine, and instances are not wanting where an issue or seton on the side has appeared to have saved a few, even in the advanced periods of this kind of pulmonary consumption.

It is in this variety of phthisis that the lichen islandicus, polygala senega, cinchona, myrrh, galbanum, sulphate of zinc, and acetate of lead, appear to do the most good. They all of them check the suppurative process, and assist in that of granulation; but much depends on timing them properly, and in not giving them in too large quantities at first.

About two ounces of the decoction of genuine Iceland moss, with the radix Senegæ, taken every four hours, and the tar vapour employed in the manner directed, are in many cases quite sufficient for the recovery of patients who have had an abscess in the lungs from neglected inflammation, provided there be not any tubercles in the lungs.—*See Formula* 13.

Where the suppuration is extensive, and the expectoration consequently very copious, I generally give minute doses of the acetate of lead and opium along with the decoction of Iceland moss.—*Formula*, 14.

The watery extract of myrrh I have given repeatedly. It is an useful mild tonic, and gentle stimulus to the lungs. It is not an efficacious medicine, yet agrees with some constitutions better than any other tonic. The cinchona in

larger doses is better, if it does not produce any pain in the chest or dryness of cough.

The sulphate of zinc is also an useful tonic for diminishing the quantity of purulent matter which is expectorated; but it is a capricious medicine, producing nausea and vomiting even in small doses with many, and ought to be abandoned if the cough increases in frequency. A quarter of a grain is a sufficient dose to begin with. Some stomachs cannot bear even a sixth of a grain without being affected with nausea and vomiting; others can take a grain without experiencing any such effect. In this case it acts as an excellent and powerful tonic, and the only watch to be held over it is to observe that it does not produce fresh inflammation.

It may be combined with the compound pill of galbanum, or with the watery extract of myrrh. It does not agree well with opium, and in this respect it differs in its action on the stomach from the superacetate of lead.

However rapidly the strength of a patient may sink in this or any other variety of phthisis, however much tonics and pectoral stimulants may be indicated by the general appearance of the patient, their effects on the lungs must be

watched with the utmost attention; for if the action of the heart be increased, so as to become disproportionate to the activity of the vascular system of the lungs, fresh congestion and inflammation will take place around the ulcer; an effect which is immediately announced by increase of febrile heat, a more frequent cough, diminished expectoration, and increase of dyspnœa.

Exercise on horseback, when it can be borne, or on foot, or in a carriage, are all of them useful aids in this kind of consumption, especially for interrupting the daily paroxysms of hectic fever; and it is also in this kind of phthisis that a sea voyage does, perhaps, the most good.

Since I have employed the vapour of tar in this complaint, I have seldom found it necessary to employ other tonics than the Iceland moss and Senega root, together, as I have already stated, with occasional doses of the superacetate of lead and opium, which I omit and renew according as the purulent expectoration is profuse or otherwise. But I beg to observe, that it is not the Iceland moss of this island, but that from Norway, Iceland itself, Sweden, or Finland, which is to be trusted to.

Large vomicæ, in strumous habits, appear to be quite incurable by any means.

When purulent phthisis is complicated with chronic hepatitis, the danger is greatly increased, and the treatment is naturally modified by it, requiring not only great judgment and discrimination on the part of the practitioner, but also a minute attention to all the characteristic features of each disease.

The *sputa* are always tinged with bile in this complication, and in general leave a bitter taste in the mouth of the patient. They are sometimes of a saffron yellow colour, sometimes greenish yellow; there is sometimes a pain on pressing the hand on the region of the liver, but in several cases little or no pain follows the examination. The albuginea of the eye is almost always tinged with bile, the appetite defective, the stools either pale or overcharged with dark or green bile, and the symptomatic fever is commonly greater than in pure phthisis.

It is only in slight cases of hepatic affection, combined with purulent phthisis, and in constitutions otherwise good, and where the abscess in the lungs is not large, and not of long standing, that there is any hope whatever of cure; for it is scarcely possible to exhibit the necessary quantity of even the mildest mercurial preparation, without bringing on diarrhœa, and it is only in

the earliest periods of this disease that such an evacuation can be borne with impunity.

In the early stages of this complicated disorder, some bloodletting by leeches or cupping, blisters, and mild mercurials, are the chief remedies. In the second, or atonic period, the *external* application of mercury, by means of the unguentum hydrargyri, the common mercurial pill in minute doses, the extract and decoction of taraxicum and chelidonium*, with minute doses of the tartrate for antimony, are the best means for assisting nature, and withdrawing the congestion of blood from the hepatic viscera.

For the treatment of a vomica in a rheumatic habit, see the remarks on the complication of rheumatism with tubercular phthisis, in the preceding chapter.

* *Chelidonium Majus* is unfortunately rejected by the London and Edinburgh colleges. It is a medicine of considerable and undoubted efficacy in atony of the liver, when judiciously given. Its extract, if prepared with care, is one of its best preparations: combined with the ext. of taraxicum, either with small doses of calomel, or with neutral purging salts, and with soda, according to circumstances, is a valuable medicine in many cases of chronic icterus.

CHAPTER V.

On Bronchitis, and the Consumption which frequently arises from it—its Prevention and Cure.

THE modern appellation bronchitis is properly applied to denote an inflammation of the mucous membrane which lines the bronchiæ, a disease well described by Sydenham, under the denomination of peripneumonia notha.

It is, however, to the excellent works of Drs. Badham and Hastings that we are indebted for still more correct notions concerning its varied character, and for the extension of the term to diseases, which, until they wrote on the subject, were always considered as distinct from each other.

The principle I have laid down of not swelling this small volume by any matter which is foreign to its chief object, prevents me from dwelling on the different forms of bronchitis, until it degenerates into a real phthisis or consumption; but I must remark, that I consider the true seat of bronchitis to be confined to that portion of the bronchia which begins at the bi-

furcation of the trachea, and which reaches to its remotest ramifications and termination in the air cells.

The inflammation of the mucous membrane of the trachea, from the bifurcation upwards, produces, according to circumstances, the symptoms of all kinds of catarrhal affections, influenzas, and common colds, which, in a practical point of view, are distinct from bronchitis; and which, although considered by most writers as degenerating in many cases into phthisis, seldom do so, except in an indirect manner.

The inflammation of the mucous membrane lining the larynx and the upper part of the trachea produces the croup, and all the varieties of laryngitis, one of which I shall have occasion to consider more fully in the next chapter.

Although, in a pathological or rather anatomical point of view, the word bronchitis be properly applied to the inflammation of the membrane lining the bronchiæ, yet, except its subspecies and varieties be distinguished by distinct names, it may be doubted whether its adoption is likely to do any good; for surely no practical physician will admit that the cynanche polyposa of the late Dr. Warren, and the peripneumonia notha of Sydenham, both of them decidedly cases

of bronchitis, according to the ideas given of it, are one and the same disorder, or require the same treatment. The humid asthma also, as it was called, is a bronchitis, according to the notions at present entertained of it, and indeed it is nearly allied to the nature of peripneumonia notha; yet it differs from this as well as from cynanche polyposa in many particulars. The constitution of the patients who are subject to asthma is of a very peculiar and distinct kind, and the true seat of the asthma humidum is chiefly in the air cells. It is a disease which is very similar to bronchitis in many particulars, yet differs from it in others.

A physician, therefore, who feels the necessity of accurate distinctions, and is aware how much the success of his practice must at times depend on such minutiæ, will not easily admit that these three diseases are quite similar, and of one and the same character, although in fact they may all come under the general name bronchitis.

Practitioners are fully aware that very different symptoms arise during life, and very different appearances are detected in mucous membranes after death, according to a difference not only in the degree of inflammation, the duration of the disease, but also to the peculiar diathesis

of the individual. Of all mucous membranes, that of the bronchia admits of the greatest variety in respect to this; but until our pathology of inflammation is better understood,—until, for instance, we know the reason of the different changes which inflammation produces on the blood, as it circulates through the inflamed part, and the reason of the many and varied secretions which take place from inflamed vessels and membranous surfaces, we must rest satisfied with a mere knowledge of the facts, as so many insulated phenomena.

In the whole course of my practice, I have not seen more than three cases of bronchitis giving birth to the exudation of such quantities of coagulable lymph as to form the cynanche polyposa; and although in one case every symptom of phthisis was present, except colliquative sweat, expectoration, and colliquative diarrhœa, yet I have never known this bronchitis to terminate in any variety of pulmonary consumption.

The real phthisis pituitosa of the German physicians occurs in certain individuals as a sequel of the acute bronchitis which Sydenham has so well described as peripneumonia notha, and which has been often confounded with catarrh. It is, in fact, a chronic bronchitis. Dr.

Macbride denominated it tabes catarrhalis, and tabes mucosa; but considering the great similitude which the disease has, on the one hand, to other kinds of pulmonary consumption, and, on the other hand, the puriform nature of the expectorated fluid, there does not appear any good reason for giving it a new name.

It has but few characteristic features, so that when a person has laboured under it for some time, it is only by a patient and minute inquiry into the origin of his complaint, and the history of its progress, that it can be distinguished from some advanced cases of tubercular and purulent phthisis.

A frequent cough, accompanied by profuse expectoration of vitiated mucus, a general wasting of flesh and strength, a kind of soreness all over the chest, but nothing like stitch or fixed pain, little or no hectic fever until the strength is greatly reduced, more or less disorder in the digestive organs, such as a foul tongue, want of taste, and deficient appetite, are circumstances which will always engage the attention of the physician, and make him inquire more particularly concerning the exciting causes, and first symptoms of the disorder.

It is not every case of chronic bronchitis which

is to be considered as a tabes or consumption; for old people may, and often do, labour under chronic bronchitis for a great many years, without losing much strength or flesh, or without any great derangement in their constitution; and this is another reason why the appellation phthisis pituitosa, or tabes mucosa, ought to be retained and strictly applied to that dangerous variety of chronic bronchitis which assumes every character of pulmonary consumption.

The chief features of this variety, independently of those already stated, are the constancy of the cough, the purulent-like expectoration, a quicker pulse than usual, decomposition and emaciation of the whole body, and at last a regular hectic fever.

Dr. Hastings, in describing chronic bronchitis, says, in speaking of the expectoration, "Some part of the matter expectorated is in lumps, which vary in size from a small pea to that of a common bean. They fall to the bottom when thrown into water, and can be diffused in it. They are viscid and coherent, and are sometimes translucent, sometimes opake. As well as the lumps, there is often a flaky substance, which has occasionally a ramified appearance, not unlike the divisions of the bronchia. When the

patient spits in water, this kind of matter rarely sinks to the bottom: it usually swims, retains its tenacity for some time, and is not dissolved. There is for the most part a third kind of matter expectorated, which is white yellow, or greenish."
—*See p.* 266, 267.

I have quoted the above passage merely to have an opportunity of stating that the first kind of such expectorated matter described by Dr. Hastings is one I have never met with in any case of chronic bronchitis, although I have frequently seen it in catarrhal affections. It has appeared to me, in all cases, to be a secretion from the trachea in a state of subinflammation, but not as one ever occurring in the bronchia.

Bronchitis chronica having passed to that stage which merits the appellation of consumption, is always characterized by a preternatural heat of skin, except the patient be kept in a cold apartment; and this heat increases towards the evening, until a regular hectic occurs. The patient is subject to irregular and partial sweats.

All patients describe the disease as the effects of a common but severe cold, because they make no distinction between catarrh and acute bronchitis; but on inquiry, if the patient be intelligent, and remembers his feelings, it will be found,

that although there was general uneasiness all over the chest, yet there was not that sense of soreness and rawness in the direction of the trachea, from the throat to the middle of the sternum, which peculiarly characterizes catarrh, nor a fixed acute or oppressive pain, as in peripneumony. The commencement of expectoration, in severe cases of catarrh, is always painful, and the matter generally thick and tenacious; but in bronchitis it is a thinner mucus, and is extricated without the same kind of painful feeling, and is coughed up in large quantities. In the greater number of cases of bronchitis the patient can take a full breath without any sense of irritation or pain; but in severe cases of catarrh this is scarcely possible, without bringing on a fit of coughing.

When bronchitis degenerates into its asthenic or chronic form, the slime or mucus which is spit up is various, according to the extent of the disease and its duration. In the beginning it is evidently of a mixed kind, being chiefly whitish, yellowish, or greenish white mucus, with some flakes of a coagulable lymph.

Where the membrane is much altered by the prolongation of the disease, and where there is great debility, the mucous matter is often of a brownish

colour, as if some particles of dissolved blood were mixed with it.

In bronchitis there is a sense of tightness across the whole of the chest, but which does not impede respiration. On the contrary, a full inspiration seems to give some relief to the patient; yet all these circumstances are liable to be much altered by the violence, and extent, and period of the disorder.

In the advanced stages of the chronic kind, the face is not only seldom flushed, but on the contrary is generally of a dull, pale, and sometimes of a leaden hue; and where there is a copious secretion of mucus in the bronchia, the oxigenation or decarbonization of the blood being impeded, the lips, tips of the ears, and nose acquire a dull subviolacious or purplish colour; appearances which are never met with in phthisis succeeding hæmoptysis, and very rarely in the tubercular phthisis.

In bilious habits, the sputa are often tinged with bile, and are bitter to the taste. In other cases, the patients complain of the expectorated fluids being salt, sweet, or mawkish, and often stinking.

After a certain lapse of time, the disease in its progress assumes every character of pul-

monary consumption. The mucus has no longer its tenacity, but becomes a real puriform secretion, its particles or globules having very little cohesion; the strength and flesh declining rapidly; and a daily exacerbation of hectic fever, with its colliquative sweat and colliquative diarrhœa, following closely.

These bad symptoms I have known to come on so early as in the third week, counting from the first attack of acute bronchitis: in others I have known the chronic bronchitis continue half a year and upwards, before actual hectic fever occurred.

The urine is generally turbid in this complaint, and the alvine discharge regular, except in the advanced periods.

In this country it is rare to meet with the disease in a pure and unmixed state; for although it frequently attacks those who have not yet had any tubercles in the lungs, these soon begin to be formed in this climate, and are multiplied as the debility increases, rendering the disease more complicated and fatal.

In the first stages of the disorder there is less hurry of breathing, and constant dyspnœa, than in the tubercular kind, especially if the expectoration of the mucus be easy and in proportion to

its formation; but as the powers of life become weakened, a sense of oppression and suffocation arises from the great accumulation of mucus in the bronchiæ, and the want of power to cough it up.

Death happens, therefore, either from extreme exhaustion, and as a natural consequence of the diarrhœa and night-sweats, or by suffocation from the too rapid accumulation of fluid matter in the bronchiæ. The inflamed membrane ulcerates in some few cases, and where tubercles have either existed before the disease, or have been formed during its continuance, ulceration may take place. In Dr. Hastings' valuable work, already quoted, several cases of this kind are adduced as belonging to chronic bronchitis. But the pus-like qualities of the matter expectorated have made many medical men suppose ulceration to be present when it did not in reality exist; for it is not possible, as far as I know, to distinguish the pus-like matter of inflamed mucous membranes from the pus of some ulcers.

When no opportunity of seeing the complaint in its beginning, and of following it during its course, has occurred, it is extremely difficult to distinguish this disease from the tubercular phthisis. I know of no criterion or pathogno-

monic symptoms which can be relied on. Chemical tests have been proposed to enable any one to distinguish diseased mucus from pus; and it might be desirable to possess such means, although it is of much less importance in practice than has been imagined. Whether the matter expectorated be real pus, secreted by an inflamed membrane, or only an altered and vitiated mucus, is a circumstance which would not affect the treatment of the disorder in any material point of view. If an inflamed mucous membrane is capable of forming true pus, then the most important of all circumstances for the practical physician cannot be learnt by any chemical analysis; I mean whether the disease be confined to the bronchiæ, or whether there be any ulceration in the parenchyma or substance of the lungs; for this only is important, inasmuch as it affects the physician's judgment in regard to the chance of recovery. With this view, the art of judging by means of the sthenoscope of Laennec is of much more importance; for, provided his observations be accurate and well-founded, of which I have had as yet no experience, the instrument will certainly become of value in the hands of a competent judge.

Bronchitis terminating in phthisis pituitosa may arise from an extension of chronic inflammation of the liver: of this complication I have seen several instances. A very minute and accurate inquiry into the history of the disease is necessary to the finding out the origin of the disorder. But if this be done with patience and judgment, there is no difficulty of coming at the truth, except such as now and then arises from stupidity on the part of the patient; for we unfortunately meet every now and then with some who seem incapable of giving a distinct answer to the simplest question.

A physician may suspect the consumption of which we are treating to be connected with a diseased affection of the liver when the tongue is foul, the appetite irregular, and rather defective; when there are pains about or under the right scapula; when the stools are whitish, blackish, or green, or of any unnatural colour; when there is uneasiness and fulness at the epigastrium, or in the right hypochondrium, especially if these are increased by pressure on these parts: and he may suspect, upon good grounds, the phthisis to have been the consequence of the hepatic affection, if the patient assures him that long

before any cough arose he had been suffering at times from pain in the right hypochondrium or pit of the stomach, connected with tenderness on pressing these parts, and with constipated bowels.

This complication is a common disorder among the lower classes in this country, at least, such is the impression which was made on my mind, many years ago, when I was physician to a Dispensary, and to the Westminster Hospital. In Russia, I have seldom witnessed this complication, even among the poor.

Almost all the cases arose from unavoidable exposure to cold, or rather to sudden transitions of temperature.

The work of Dr. Hastings, which is enriched with a number of well defined cases, has thrown much light on them.

Need it be mentioned, that repeated attacks of cold, in habits disposed to membranous inflammation, may produce at once bronchitis, pleurisy, and hepatitis; and that this complication generally terminates very soon in one of the worst kinds of phthisis, if neglected, as it generally is among the poor? for in this case, the bronchitis soon degenerates into phthisis pituitosa,

and the pleurisy extending into the parenchyma of the lungs, ends in extensive superficial ulceration of the organ, so that the process of destruction in such cases runs a very rapid course.

A superabundance of fibrine in the blood seems to be peculiar to certain debilitated constitutions, as well as to some that are vigorous. This, in which the phlogistic diathesis seems chiefly to consist, lays the foundation for what is called the sudden translation of inflammation from one part to another.

In this way the phthisis pituitosa, or chronic bronchitis, is often created. I have seen it follow the sudden disappearance of erysipelas, of eruptions accompanied with a serous discharge, and of the imprudent healing of old ulcers. It is true, that in such cases accidental causes have generally conspired, such as exposure to cold; but these were commonly so slight as not to have been capable of exciting any disease, except in one singularly disposed to such inflammation.

A cold solution of acetate of lead, or even of oxymuriate of mercury, applied for too great a length of time to any parts of the human body covered with a serous eruption, or even to old sores, or kept wet on the part for some hours at

a time, I have known to produce the very worst kinds of bronchitis and carditis, and of phthisis pituitosa.

In such cases, it is by no means uncommon to find the inflammation seizing the bronchiæ, and also affecting many of the serous membranes, such as those of the eye, the pleura, peritoneum, and membranes of the brain.

Upon opening the thorax of those who die of this complaint, it will be found that in nineteen cases out of twenty the lungs do not collapse, owing to the quantity of fluid which fills the air cells and bronchiæ. Another remarkable appearance is a kind of induration which pervades the lungs of those who have died of chronic bronchitis. The lungs take an appearance of a much more solid body than they are in health, and in general they are more vascular.

Such cases are generally fatal; for they cannot be cured by the lancet, and time is not allowed for the operation of antimonials, calomel, tepid baths, &c. and such remedies as would correct the diathesis.

The sudden suppression of the catamenia, the translation of rheumatic and gouty inflammation to the lungs, and the diathesis produced by some

cases of common fever, and more especially by scarlatina, are all common and rich sources of phthisis pituitosa. The phthisis arising from such sources have been considered by some authors as distinct varieties of the disease, and have received different appellations, especially by M. Julian Bonafox Dumalet, who dedicates a particular chapter to the *phthisie exanthematique; phthisie par fièvre grave; phthisie rheumatismale rachitique ecrouelleuse par atrophie mesenterique, ph. arthritique, &c.*

One of the very worst and most incurable kinds of pulmonary consumption, arising out of bronchitis, is that which happens to dram-drinkers, commonly called in this country the gin-cough. It is generally fatal, because it seldom occurs until the vitality of the stomach and lungs is almost wholly exhausted, and incapable of being renewed.

But in general, the phthisis pituitosa, arising from other common causes which have preceded chronic bronchitis, is curable, provided, as has been already stated, the disease be confined to the mucous membrane.

CHAPTER VI.

Of the Prevention of Bronchitis and consequent Phthisis from Measles.

INNOVATION in the treatment of any disease whatever, the safety and efficacy of which treatment, has been attested by the very best practical physicians of all ages and countries, should always be received with great distrust, especially if the new method be founded on mere reasoning from supposed and too often false analogies.

The great advantage derived from the free admission of cool air, and the exhibition of cold drinks to patients labouring under small-pox, scarlatina, and almost every variety of typhoid fever, whether with or without eruptions, is universally admitted to be a great improvement in modern practice; but some very false analogies have induced many physicians to recommend a similar method in measles; a method which I am convinced, not only from reason, but from what I have observed, produces irreparable injury to many individuals.

The excessive heat of the skin which accompanies measles in general, the dryness and un-

easiness in the throat and fauces, make every one who suffers under this very serious disorder desirous of cold air and cold drinks; and a physician's judgment and sympathy are often put to a strong test by the entreaties of the patient. A great many may, no doubt, be indulged to a certain extent in this desire; for in almost all mild cases of the disease it is of little importance. But the patients who have recovered after being thus treated have added their praises to those of a number of medical men, who speak highly in favour of the cold treatment in measles as a most agreeable and beneficial innovation. That it is agreeable to the feelings of the patient, and that those who outlive it should praise it, is quite natural; but whether it be at all times a safe and judicious method is a very different question.

It is well known that the complaint is severe or mild according, chiefly, to the constitution of the year, and that of the individual; for in seasons the most advantageous for patients labouring under this epidemic, few cases occur in which the complaint appears in all its terrors.

It is in severe cases only in which the skill of the physician is really necessary, and in which it is important to lay down strict rules; for in the multitude of mild cases, the patient recovers

under almost every variety of bad treatment. The common restraints of confinement to the house, and barley-water for common drink, are sufficient for the recovery of any case where the disease is of a benign or mild kind.

In no other fever that I know of, however, when severe, is there so much danger from inflammatory action as in measles; nor is there a disorder where certain *minutiæ* of practice are of greater consequence and more to be attended to. These consist in keeping up a very mild but constant moisture on the skin, especially during the whole of the eruption, and for a day or two after the eruptive fever is on the decline, and in not exposing the patient too soon to the sudden impression of cool air and cold drinks; and this is to be accomplished by rigidly prohibiting all drinks, except those which are tepid, whether simply aqueous or mucilaginous, and by paying the greatest possible attention to the preserving a constantly well-regulated temperature of air in the bed-room of the sick.

Medicines are of very little effect in this disease, except in the first stages of a severe case of measles. The salvation of the patient depends almost entirely on the due employment of general or local blood-letting, blisters, and, above

all, the avoiding with the greatest possible care the slightest impression of cold air, let his apparent uneasiness and restlessness from heat be what it may. But, in fact, if the air of the bed-room be kept, as it ought to be, of a moderate degree of warmth, and no cold drink be allowed, the patient is never very uneasy from heat, except he be overloaded with bed-clothes, or be of an impatient and restless disposition, or when the skin becomes dry and hot. Of all methods of keeping up a perspiration on the skin, that which is effected by loading the patient with bed-clothes is the most injudicious; for the accumulation of heat which this occasions exhausts the patient's strength, and renders him restless.

In mild weather, a single blanket and sheet is sufficient in this country; and in warm weather, the sheet, with a common counterpane, are quite enough, provided there be no current of air playing constantly across the bed, which should not be permitted any more than cold drinks: and it is impossible for the physician or attendants to be too attentive to these minutiæ, especially where the eruptive inflammation extends along the whole membrane of the throat, trachea, bronchiæ, œsophagus, and stomach. These,

in fact, are the only cases in which the conduct of the practitioner is either eminently beneficial or hurtful.

Every physician of experience must have observed, I think, that, at the height of the disease, the stomach often rejects all saline solutions and all sweet drinks; and, indeed, in many cases, almost every kind of drink. This happens from a slight inflammation of the villous coat of the stomach; an occurrence which seldom lasts above twenty-four hours, and scarcely ever so long, if the patient be kept in a state of gentle perspiration.

The vomiting is always increased, as to frequency, by checking this salutary discharge. The moment the skin becomes dry, the cough, vomiting, and restlessness increase. The less fluid the patient takes at a time, during this kind of struggle, so much the better; and the drink which agrees best is either very thin barley-water, or plain toast and water, or simply water of the temperature of fresh drawn milk.

Any attempt to keep up the perspiration by Dover's powder is pernicious, and antimonials are inadmissible, on account of the state of the stomach. The saline diaphoretic is, in the cases alluded to, rejected almost immediately on reach-

ing the stomach, so that, in fact, there is no resource but in patience and external means.

When the strength of the patient is good, and his pulse not over hard, above all, when his breathing is not peculiarly oppressed and hurried, little else is necessary than an equal temperature and tepid drinks; but when the opposite symptoms occur, that is, when the pulse is full and hard, the cough still dry, and the breathing hurried, the loss of about ten ounces of blood, followed immediately by a blister on the sternum, or on the epigastric region, together with the treatment already mentioned, generally bring complete relief in a short time.

In many cases, especially in children and very young people, I have trusted entirely to leeches on the anterior part of the throat and chest. For infants, a single leech is enough, the vascularity of their skin ensuring a sufficient loss of blood by this means; and two leeches I have found enough for children under three years of age, for the same reason.

For adults it is better to have recourse to the lancet, although there are cases where eight or ten leeches answer all the ends one wishes to attain.

When a contrary practice has been followed, or great inattention has taken place, and the patient has been exposed to a current of air, and to an increase of catarrhal symptoms, one of two events generally takes place; first, a very rapid secretion of mucus in the bronchiæ, which the patient has not strength to cough up as fast as it is formed, and which consequently terminates fatally by suffocation; or, secondly, if the strength of the patient be equal to the struggle, yet the mucous membrane from a state of high excitement soon falls into an asthenic one, and the phthisis pituitosa follows. Hence my apology for having said so much on the treatment of a disease not apparently the object of the work.

There is another period in which patients, recovering from measles, are threatened, from similar causes, with one or other of these dreadful consequences, and that is any time within the first fortnight, and sometimes so late as three weeks after the cessation of fever; for in a great number of people the bronchitis is most easily excited by the imprudent exposure to cold during this time, the inflammatory diathesis not having been conquered.

I do not mean to imply from this, that patients recovering from measles ought to be con-

fined within doors during the whole of the time alluded to, after the fever has ceased, especially in summer, and when the weather is fine; but in autumn, and the beginning of spring, in which seasons measles now and then occur, too great precaution cannot be used. The same advice is necessary for delicate and weakly people, of a scrophulous habit, at all seasons of the year on their first recovery from measles.

When I said that minutiæ in practice were absolutely necessary in the cases referred to, I did not mean minutiæ as to internal medicines, but a most minute attention on the part of the physician to every circumstance which is calculated to affect the patient; and, as has been already stated, these, in severe cases of measles, are chiefly external circumstances, and are of such a nature as scarcely to be enumerated, because they vary in every bed-room.

The situation of the bed is of importance; the current of air from the windows, door, or chimnies is important; the varying the temperature of the drink according to circumstances, the state of the bowels, the heat or temperature of the feet, are all minutiæ which, although commonly intrusted to nurses and attendants, are of too much importance, in this complaint, not to

demand the greatest vigilance on the part of the practitioner.

The laryngitis which terminates in laryngeal phthisis or phthisis trachealis, whichever denomination is given to it, is of a very peculiar kind; for the membrane lining these parts is frequently inflamed without producing the disorder.

A peculiar predisposition lays the foundation for this disease, and this predisposition is almost always an accidental occurrence.

When phthisis pituitosa is once formed, no matter whether from measles, or cold after scarlatina, or from neglected catarrh, the treatment is nearly the same.

Where it is unconnected with tubercular inflammation, and more especially when unconnected with ulceration of the substance of the lungs, as a consequence of pripneumony, the disease is generally curable.

The chief remedies are the vapour of heated tar, occasional emetics, blisters, and rubifacients, the decoction of the Iceland moss, and the radix senega combined, small doses of the sulphate of zinc and extract of myrrh (*see Formula, 24*), the cinchona alone, or with Iceland moss, the colomba root, and other similar tonics, the balsam of co-

paiba, and the balsam of Peru; all of which remedies may be changed or combined, according to the constitution of the individual, and the circumstances of the case. Along with these opium, and some of the other narcotics, are to be superadded as palliatives for allaying the frequency of the cough.

The disease, although generally an atonic one, does not always admit either of tonics or pectoral stimulants, and the practitioner must be on his guard while administering them. An increase of cough, or any painful sensation of tightness or uneasiness at the chest, ought to make him desist. In such cases blisters, rubifacients, or a mild diet and demulcents, are the proper means, until all uneasiness ceases, and then Iceland moss, with or without the senega polygala, according to the effects produced, are to be persisted in.

Emetics are useful in almost all cases, because they assist the expulsion of much mucus from the bronchia, and consequently produce an intermission in the cough. In many people, also, they seem to excite the whole of the absorbent system, and therefore produce a diminution of the thinner parts of the mucous secretion.

Where the strength is entire, they may be ex-

hibited early in the morning; but I commonly prefer giving them in the evening, by way of insuring some hours of quiet to the patient during the first part of the night.

Where the expectoration is very abundant, and night-sweats prevalent, the sulphuric acid is useful in this variety of phthisis; but if the disease be complicated with tubercles, the acid, although at first it does good, soon produces a sense of tightness in the chest, and an increase of the cough.

In many cases, where the expectoration has been very great, I have given the acetate of lead in minute doses with opium, with the greatest success.

That lead, either given internally or when in too constant contact with the human body, often destroys the sensibility of the nerves, and produces palsy, I admit; for the facts are too positive and numerous to permit a denial by any candid or impartial person, who is, at the same time, a competent judge and observer of medicines, and who has the means of witnessing their varied effects; but, on the other hand, I know that in the greater number of people labouring under phthisis and uterine hæmorrhagy, small doses of the acetate of lead may be exhibited for

months together without producing such mischief, provided due caution be taken. This caution consists in not giving more than one-third or half of a grain for a dose, except in urgent cases; in never permitting oneself to give a large dose, and in exhibiting, every third or fourth day, a little castor oil to relieve the bowels, and carry out any part of the medicine which may be lodged in them.—*See Formula*, 25.

Colliquative discharges, whether of blood, mucus, or pus, which are accompanied with acute sensibility of the nerves, are generally much diminished, and often altogether corrected, by the combination of lead and opium.

The decoction of senega root and the Iceland moss may be given at the same time.

The balsams of copaiba and Peru, either separately or in combination with each other, and with opium, are excellent remedies in very atonic cases; but none of the medicines enumerated are capable of curing bad cases, without the assistance of the tar vapour.

The balsams of copaiba and Peru may be exhibited according to the formula, No. 26.

In some cases of this complaint the Peruvian bark, in substance, does great good; in others it excites coughing; and although it seldom does

harm, except in cases where the inflammation of the mucous membrane has been communicated to the parenchyma of the lungs, yet it is by no means possible to distinguish, *a priori*, the cases in which it will do good or harm. Trials must be made with caution.

Shaller has even recommended the oak bark and sulphate of iron in this complaint, as a kind of specific in this variety of consumption (*see Formula*, No. 27), and a similar medicine has been lately much extolled by Dr. V. Nelson.

Such combination of medicines is only useful in chronic bronchitis, and phthisis pituitosa of a purely atonic character. Where there is an affection of the liver, or any tubercles in the lungs, they do not answer.

But the vapour of tar generally does good in this disease; and the only remark I have to make concerning it is, that, in all cases, it ought at first to be of moderate strength, and that it need not be inhaled for more than two or three hours at a time. This ought to be repeated three or four times a day, and the strength of the vapour increased as the patient can bear it.

In this complaint change of air, and a sea voyage, are often extremely beneficial.

Bleeding from the arm, or even by leeches, is

seldom admissible in the phthisis pituitosa. But this remedy is very useful as a preventive one, while active inflammation of the membrane exists, or during the stage of acute bronchitis.

The combination of this kind of consumption with affections of the liver is a common circumstance, which is easily accounted for, as the general causes which first produce inflammation of the membrane lining the bronchiæ are calculated to excite membranous inflammation of the liver also, and, indeed, often do so.

This complication is judged to be present by attending to the history of the exciting cause, and to the first symptoms; by tumefaction in the right hypochondrium; by uneasiness or pain on pressing the region of the liver; by the stools being either pale or atrabilious, or of a deep green colour; by pain extending from the epigastrium to any part near the scapula of the right side; by the yellow colour of the skin and urine; by a foul tongue and deficient appetite, and uneasiness in the epigastrium, or right side, after eating.

Small doses of the common mercurial pill, in combination with the Iceland moss, the tar vapour, and other remedies already mentioned, are sufficient, in all such cases, provided the liver be

not already so much disorganized as to be incapable of returning to a healthy state.

The pill, No. 8, composed of the compound pill of galbanum with mercury and extract of hemlock, I have found very useful in this complication of hepatitis chronica and phthisis pituitosa.

In the commencement of this complicated disorder, where there is too great a secretion of vitiated bile, and where the strength of the patient will permit the employment of eccoprotics, the extracts of taraxicum and chelidonium, with senna, are chiefly useful, the small doses of mercury being continued occasionally, that is, for three or four days together, and then with an interruption of two days, for fear of a mercurial action being too soon excited.

Although the cure of phthisis pituitosa, when of an unmixed kind, may be always hoped for by the combined influence of the vapour of heated tar and the remedies already mentioned, yet this disease, like all chronic affections of the respiratory organs, requires much spirit of observation, much acumen in attributing unexpected changes to their real sources, and in varying the formulæ and their doses according to the circumstances of each case; circumstances which it is

almost impossible to teach in any dissertation without becoming tediously prolix, and even then imperfectly; so very difficult it is to define the minute differences of individuals, their constitution, and the changes of disease which modify practice.

CHAPTER VII.

Of the Laryngeal and Tracheal Consumption.

THE laryngitis, or acute inflammation of the larynx, which terminates in ulceration of its cartilages, and a rapid destruction of life, is, of all varieties of consumption, one of the most hopeless, and is acknowleged to have baffled every known remedy; but, from some late trials, I have reason to hope it will cease to be so incurable.

The membrane of the larynx is frequently inflamed, in a considerable degree, without its being followed by this dreadful malady; and yet some of the most common causes of catarrhal complaints are at times sufficient to excite it.

A certain state of body, very nearly allied to general asthenia, is frequently the only evident cause of predisposition. An impoverished state of health from want, over-fatigue, cold, damp, confined apartments and constant anxiety, are the common causes of predisposition among the poorer classes, as far as my observation goes. Among the rich, they are also all of them debilitating powers, many of them however being

of a very different description from those just enumerated, inasmuch as they arise in most instances from mere abuse of health, to which care, anxiety, and distress of mind are often superadded. I do not recollect to have seen one case of laryngeal phthisis attack a strong healthy person. Even laryngitis occurs more frequently in people who are previously weakened, to a certain degree, than in those who are in health. I have, however, seen very acute cases of laryngitis in a few whom I should not have pronounced to be of very debilitated habits.

But as to laryngeal consumption, it is wonderful from what apparently slight exciting causes it arises in some weakened constitutions, especially those of a scrophulous or strumous habit.

These exciting causes are similar to those of all catarrhal complaints. The most frequent are sudden changes of temperature, either general or local. Such causes occurring frequently, seem of themselves to beget, at last, a predisposition to the disorder, and then to excite it.

A very acute laryngitis, or inflammation of the larynx, commonly terminates fatally, like croup, in a few days, except relieved by leeches and general blood-letting, antimonials, and other appropriate remedies.

That kind which passes quickly into ulcera-

tion of the cartilages of the larynx and trachea, is either one *sui generis*, or it is of a milder type, acting on a person peculiarly predisposed.

The ulceration of the cartilages of the larynx, when once it begins, produces, in a very short time, a most remarkable effect on the general health of the patient. He loses strength and flesh more quickly than in most diseases, and the sound of his voice is immediately changed in tone. The patient cannot cough out, as it were, and the sound, produced by the act of coughing, is singularly husky. If a pressure be made on each side of the trachea, while the patient is made to speak, a cough, with a very peculiar stridulous sound, is generally excited; and this may be considered as a true test, or as a pathognomonic symptom. In bad cases, a pain extends to the throat and Eustachian tube; but, on inspecting the throat, it is seldom that we discover much inflammation. The cough is frequently excited, and continues in one uninterrupted paroxysm until a quantity of frothy mucus, mixed with minute portions of purulent matter, is extricated. Hectic fever, night sweats, and colliquative diarrhœa occur as the disease proceeds.

The only remedy which has hitherto arrested this fatal complaint has been the vapour of heated

tar; and it promises to be effectual in most cases if taken in time, and if administered with all the caution which has been recommended. But the confining patients, labouring under this variety of phthisis, to an uniformly mild temperature, is also a most essential part of the cure. Patients labouring under this disease ought to speak as little as possible. The best internal medicines are the Iceland moss in large doses, and the balsam of copaiba, with the balsam of Tolu and sulphur at bedtime.—*See Formula* 28.

This last combination of medicines, which it occurred to me to try only of late, produced very decidedly good effects in a case which fell under my care. Where there is much pain, blisters afford a temporary relief: opium and its preparations do harm.

The inhalation of the steam of warm water, and the swallowing, frequently, tepid mucilaginous drinks, afford some alleviation of symptoms in the commencement and inflammatory stage of the disease. When the vapour of tar is to be breathed, it is of importance that the air of the apartment be not too dry, and I presume that it is only useful when employed in due time, and before the cartilages of the larynx are nearly destroyed by ulceration.

CHAPTER VIII.

Is Consumption hereditary?

THE idea that a child is doomed by its birth to some dangerous or humiliating malady is in itself so painful a thought, and to a parent endowed with much sensibility it is a source of such unceasing distress of mind, that it is not wonderful if many attempts are made to combat the opinion of hereditary predisposition to certain diseases.

That many of those who have written on this subject, attempting to disprove the influence of hereditary disposition, have been, *bona fide*, convinced that their opinions were founded in fact, cannot be doubted, because their characters stand too high to suppose they promulgated them against their conviction. That they have been glad to bring consolation to wounded spirits, there can be no hesitation in admitting.

The experience of most medical men, however, and indeed of all men endowed with a spirit of impartial observation, is, I firmly believe,

1st, That of any given number of children born of consumptive, gouty, insane, or scrophulous parents, the greater number are in the course of their lives afflicted with consumption, gout, insanity, and scrophula; and that the common exciting causes of such diseases have more influence on the whole of such children than on those of healthy parents.

2dly, That although it may be admitted that of the many children born of such parents, some do escape the diseases of their parent during the whole of their lives; yet these are so few in number, compared with the others who inherit the predisposition and the disease, as not to disprove the powerful influence.

3dly, That when both parents are affected with any of the diseases, considered as hereditary, scarcely any of the offspring escape the disorder.

4thly, That one very healthy parent may counteract the influence of a consumptive, scrophulous, gouty, or insane parent. But in this case the children who escape will be generally found to partake much more of the physical character and organization of the healthy than of the unhealthy parent. Such of the children as take after, to use a common expression, the unhealthy parent generally inherit their diseases.

5thly, The disposition to insanity, in the off-spring, is less diminished by the influence of one healthy parent than the disposition to almost any other disease considered as hereditary.

6thly, That hereditary disposition to some of the above-mentioned diseases is gradually lost, after a few generations, by intermarriage with healthy people, who have no hereditary tendencies to such diseases.

7thly, That the disposition to consumption is often entirely removed in the third generation: the same with scrophula; and that both might be rectified by the influence of climate acting from infancy on one or two successive generations.

It is certainly dreadful to imagine that human foresight and skill shall not be able to preserve a child from a fatal or afflicting malady, if born of parents who transmit the predisposition to their offspring. Much certainly may be done by avoiding the existing causes, when known and foreseen: but if the opinion, as to the precarious health of such children, be consonant to the experience of the most enlightened physicians of all ages, and confirmed by daily observation, it is very doubtful whether much more benefit to society at large is not likely to result

from boldly proclaiming and maintaining the painful truth, than by contradicting it, with a view of bringing consolation to a limited number of individuals, and encouraging them to marry; for unquestionably, although the condemning people who have had such disorders, together with their children, to celibacy, might be considered as harsh towards them, yet the happiness of society would be augmented by it; and no one, I think, who is endowed with good feelings, can avoid being pained at the rapid increase of some of the worst kinds of hereditary evils, arising from the great indifference of many parents as to what regards the matrimonial connexions of their children.

In regard to pulmonary consumption, it is most certain that the disposition to the tubercular kind is strongly inherited by the offspring of parents who have died of that disease. To that arising from malconformation of the chest and hæmoptysis it is less so, except it be connected with a scrophulous character, which indeed it generally is; and, in regard to all the other varieties, it may be asserted that a disposition is not inherited.

It is also a consolation to know that children, disposed by their parents to tubercular con-

sumption, may have their constitutions changed by climate and great care during infancy, and the probability of the evil may in consequence be very much lessened. It is the duty, therefore, of those who are entrusted with the medical care and education of such young people, to warn the parents and relatives of the distant but threatening dangers, so as to adopt every possible precaution which human skill can devise for ameliorating the constitution, and avoiding the chief causes which excite the first symptoms of the disorder.

There are some curious anomalies in regard to the inherited predisposition to certain diseases: for instance, the disease may belong to the family of one of the parents, yet that parent, dying at a very advanced period of life, may have totally escaped it. The family disposition, however, shall affect one or more of the children, and at such an age, and under such circumstances, as to convince a medical man that no other cause than inherited disposition could be assigned for the phenomenon.

This is not to be explained in any other manner than by the fact, that the looks, mental character, and general organization of some children

resemble less those of the parents, than of some more distant relative.

If the word hereditary predisposition be painful to some ears, the appellation *organic disposition* may be substituted for it; but then it must be observed, that the organic disposition which is inherited is to be distinguished from that which is the effect of accidental conformation.

Organic disposition, from inheritance to some disease, seldom shows much influence in the very early or the very advanced periods of life.

In regard to scrophula and tubercular phthisis, it is certain that infants while at the breast, and very old people, are very rarely affected with these complaints; nor do the first symptoms of the disease occur in the early periods of life, except cold and moisture, improper clothes, poor diet, or long suffering from painful dentition, or other debilitating causes, conspire with the hereditary influence. The fact is to be explained by the general doctrine of inflammation. It is only in those periods of life when the heart and larger arteries have acquired a disproportionate force to the capillary and absorbent system that dangerous congestions and permanent mischief arise, except it be in subjects accidentally enfeebled,

which indeed they may be at any period of their lives.

Among the children of the poor, tubercular consumption is common in the first years of childhood, especially if born of consumptive parents. Among the rich, or those who can command the common necessaries and comforts of life, the children of consumptive parents seldom begin to form tubercles in their lungs until after puberty.

Considering all these circumstances, and many others which must naturally present themselves to medical men, but which it would be tedious to enumerate, I deem it necessary to add, that when I state the predisposition to scrophula to be a certain inheritance, I mean that it is so only in cold and variable climates; for the same disposition may be entirely corrected in two, or at most three generations, by a removal to warm and temperate climates.

Nay, so great an influence has climate on this kind of diathesis, that the most scrophulous children, if carried into the south of Italy before any of the vital organs are affected, gradually recover, and ultimately lose, to a great degree, this scrophulous character. Of this I have had repeated proofs during my residence in Russia.

Those who choose to cavil at words, therefore, may say that a disease which depends so much on climate ought not to be considered as produced by inheritance. That it is often produced in children born of healthy parents, there can be no doubt. That our first parents, and the first race of men, were free from it, and from all diseases termed hereditary, is also more than probable! All that is contended for is, that however it may have been originally produced in a given number of individuals, it affects the organization of their progeny, and disposes them to become consumptive by climate, and the other exciting causes, much more readily than the children of other people.

I have said that the true way of correcting the phthisical and scrophulous character was by a residence in warm and mild climates. But it is contended that this, and all inherited diatheses, may be corrected by matrimony.

There can be no doubt, that if great care be taken to marry those who are born to hereditary infirmities to very healthy people, the race will be ultimately ameliorated, the predisposition being lessened by each generation who submit to this ameliorating influence. But the immorality and cruelty of this measure cannot be

sufficiently reprobated; and I do not mean to pay court to any men, by uniting with those who recommend such means.

In regard to tubercular phthisis, it is most assuredly corrected to a certain degree, even in the first generation, by a union with a healthy person. The children have a greater chance of escaping, and the malady, though often, nay though generally fatal, is not of so afflicting a kind as mania, and some other diseases of inheritance. But still much might be said by a rigid moralist against the attempt to improve a consumptive race by such means.

Those who are of a different way of thinking, or who wish to reconcile their inclinations with their conscience, may take the following prescription, from one of the most modern and most voluminous works on medicine. Under the article Héréditaire, in the dictionary of Medical Sciences, is an article by Mons. Petit on this subject, which contains the sentiments of those who are of a different opinion from myself on this point:

" We know of only two means of preventing " the transmission of hereditary diseases. That " which we reckon the most direct and the surest,

" consists in matrimonial alliance. Every one " knows how great an influence this association " has on the physical and moral qualities of the " progeny. By the mere act of generation one " may (*à volonté*), as it were, either degrade or " exalt the physical and moral nature of man, as " one degrades or improves the race of domestic " animals. Thus the first means to be employed, " in order to prevent the transmission of a heredi- " tary disease, is to make choice of an individual " who, by the nature of his or her constitution, has " organic dispositions which are very different, or " rather entirely opposed, to those of the person " who possesses dispositions to a disease suscepti- " ble of being transmitted by an act of generation " to the progeny. For instance, a scrophulous " person ought to marry one of a strong consti- " tution and dry fibre. The strong and bilious, " the bilioso sanguineous (bilioso sanguin) and " the nervoso sanguineous (nervoso sanguin) " temperaments, appear to us to be the most " proper for destroying, in the act of genera- " tion, the scrophulous predisposition which is " almost always allied to a lymphatic tempera- " ment.

" For the same reason, a gouty subject ought

" to marry a woman of a weak and lymphatic con-
" stitution. He in whose family insanity is here-
" ditary ought to seek a wife of a temperament
" opposed to that of the persons who have been
" attacked with derangement, and who belongs to
" a family remarkable for its moral tranquillity
" and calm passions. If he be of a different tem-
" perament, he will be so much the surer, in form-
" ing such an alliance as we have pointed out, to
" have children who will not inherit the dis-
" position to madness which is in his family."—
See Dictionnaire des Sciences Médicales, tome 21, article *Hérêditaire.*

The second means for preventing the transmission of hereditary diseases, mentioned by Mons. Petit, the author of the article alluded to, consists in the wise and suitable administration *des choses préordonnées,* and *co-ordonnées,* under which terms the author of the article comprehends both the general and local causes, as well as medicines and accidents, which may effect the constitution of the individual. To the article itself I beg to refer those who desire to see what M. Petit has written on the subject.—
See Dictionnaire des Sciences Méd. &c.

CHAPTER IX.

Is Consumption contagious?

It cannot be asserted that a specific contagion is generated in the lungs of consumptive people, because the ulcers which exist in that disease, not being in every case of the same kind, they cannot be supposed to generate the same poison; but the result of my experience in regard to this subject is, that where the air of an apartment is strongly impregnated with the breath of any one, or any number of consumptive people, labouring under the advanced stages of any variety whatever of purulent phthisis, a poison is often produced by the chemical influence of temperature on a confined air thus loaded with vitiated animal effluvia, just as the poison of scarlatina is often generated from temperature acting on air loaded with the breath and perspirable matter of a number of children, when confined in small apartments.

That a healthy person sleeping constantly with one who has an open ulcer in the lungs, and especially where the ulcerated surface is large, or where

the ulcers are numerous, and where a vitiated pus is formed, almost infallibly gains the disorder, is a fact which has occurred to me to see so often, that I have no doubt on the subject. It has fallen repeatedly to my lot, particularly among the poor, to see a husband gain the disease from his wife, and many wives gain it from their husbands, under circumstances where there could be no doubt as to the influence of the poison, and no other way of accounting for the disease.

There are cases of purulent phthisis where the matter expectorated is much more active and baneful than in others. In such cases it is dangerous to be more than an hour at a time in the apartment of the sick, except it be frequently ventilated; and I have known the disease communicated, in a case of this kind, to no less than three or four relations of the patient, who devoted themselves to too constant an attendance on him.

Similar observations have been made from the very earliest periods of medicine by excellent physicians of all countries, especially by those of warmer climates; but this has produced no conviction on the minds of others, and the idea is often ridiculed by self-sufficient men, who either

do not see, or will not see, what is passing before their eyes, if contrary to their preconceived opinions. I shall take notice of some authorities who have been too much struck with the fact to allow it to pass unnoticed; but, before doing so, it may be necessary to add the result of what observation has taught me.

The breath of persons labouring under phthisis is seldom dangerous in the first stages of the disorder; for I have frequently known married people, one of whom had the disorder, sleeping together for six weeks or two months, after the disease was completely pronounced, and when separated at that period, or even a little later in some cases, no injury arose to the surviving party. This is the case only in tubercular phthisis: but in the later periods of the disorder, or when tubercular vomicæ are large, and the patient is much debilitated, and in all cases, without exception, of open abscesses after peripneumony, or ulceration after hæmoptysis, especially when the expectorated matter is offensive to the smell, the breath of such people acts like a specific poison on other people, if too long exposed to it at any time. Among married people it often causes the death of the sur-

viving party, although not otherwise disposed to phthisis.

Like all animal poisons, it appears to be inactive for some time; and, as far as I can conjecture, from the comparison of many cases, it requires from five weeks to two months, or even longer, before it breaks out: a trifling, dry, but frequent cough, with scarcely any, or at most with only slight pain in the chest, are the first symptoms. These I have known to occur, for the first time, so late as four months after the death of the husband or wife who communicated the disorder; but in the greater number of cases it has happened about the second month. In other cases I have known it to occur much sooner, especially if the party who communicated the mischief laboured long under a copious purulent expectoration. In all these respects it resembles the slow but certain contamination of hydrophobia.

Not being attended with much pain or general indisposition, it but too frequently makes a fatal progress among the lower and middle orders of society, before medical aid is required, the real nature of the disorder not being suspected by the patient.

By far the greater number of cases of this

communicated kind of phthisis occurred to me when physician to a Dispensary in London, and afterwards when physician to the Westminster Hospital. The habits of the rich, and the advice they commonly receive to sleep apart when a husband or wife labours under decided phthisis, prevent the frequent communication of the disease among them, yet even in this class I have at times met with it.

The poison does not appear to be the merely volatile parts of purulent matter, but of purulent matter which is undergoing chemical decomposition, by continuing too long exposed to air and the heat of the human body together.

Its effects are said to be more active and frequent in warmer climates than in ours. In such climates its contagious nature appears to have been a popular opinion, from ancient, down to modern times. It was so in ancient Greece, and it is so throughout all Italy at present. Aristotle, although he does not assert the fact, evidently shows that it was a common opinion in his time, by his asking why consumption, itch, and ophthalmia, are communicated to those who approach near to the persons labouring under these complaints (Probl. l. 7. viii. a.) Galen says, it is dangerous to pass the whole day with a consumptive

person, and with all people whose diseases generate putrid effluvia. (Galen iv. 87. 91.) Lommius, whose works are too little read, says the *sputa* of consumptive patients are contagious. (Observ. Medic. 1560, Amstel. 1720, pp. 120. 197.)

A very striking case of communicated consumption is mentioned by Riverius. The Abbe St. Paul took milk from the breast of a woman. She gained the disease, and died two months after him; and during her illness she communicated the disorder to her sister, who is stated to have been saved by caustics, laxative, demulcent, and anodyne remedies.

Morton asserts that consumption often arises from contagion. F. Hoffman is not so positive, but limits the influence to those who have an hereditary tendency to the disease. Van Swieton also believes in the contagious nature of phthisis; but his great credulity destroys the effect of his testimony as an accurate observer. Selle, Fritze, Wichmann, and D. S. G. Vogel, whose talents for practice, and whose experience, entitle them to be listened to, are all of opinion that phthisis may be communicated. Many French physicians and practical men are of the same opinion, such as Emale and Baumé. *See his Traité de la Phthisie*, 1795.

Rush asserts consumption to be contagious in warm climates.

Darwin believes the disease to be contagious, and the contagion to arise from aerated pus; and the cautious, respectable Heberden, although he cannot make up his mind on the question of consumption being contagious or not, confesses that he has seen several fatal cases, for which no more probable cause could be assigned than that the patients had lived too much with consumptive persons, and had slept with them.

Greater authorities than these cannot be adduced on the opposite side; but if there could, the opinion of so many men, who were distinguished in their lifetime for great experience, ought to be a powerful motive with every conscientious practitioner, although of an opposite opinion, to recommend it to married people, one of whom labours under phthisis, not to inhabit the same apartment during the night, or to be too much exposed to the breath of a consumptive companion.

CHAPTER X.

On the Method of Employing the Tar Vapour, and on the best Temperature of Hospitals and Houses for the Recovery of the Consumptive.

The best tar for the use of the consumptive is that which is used in the navy and by cable manufacturers. Whether that which is obtained from all the species and varieties of the pine tribe of trees be equally good, experience has not yet determined. One solitary observation, alluded to in the body of this work, seemed to imply that the tar obtained from the roots of the white pine was found to be the most easily inhaled and the best.

Tar, as it comes to market, is generally found to be contaminated with more or less pyroligneous acid; which fluid, being very volatile, is disengaged long before the tar boils, and as it is irritating and hurtful to the lungs, must be got rid of, or be arrested. For this reason the tar, before being brought into the bed-room of the sick, ought to be boiled for a few

minutes in the open air, and then to every pound of it ought to be added from one to two ounces of the subcarbonate of potash.

One would have imagined that the first trials made with the vapour of tar ought to have suggested the propriety of these precautions to any reflecting mind, especially if conversant with the subject; but it would appear that the very reverse of this has occurred.

Patients have been subjected to the vapour of boiling tar just as it came out of the shop, and hence it has often produced, on its first administration, a violent paroxysm of coughing, which has deterred many from proceeding with the experiment, while it has served as a pretext with those who have been prejudiced against the remedy for decrying it.

I generally order the potash and tar to be well mixed together, then a little water to be added, and the tar, potash, and water to be again mixed. By this means the alkali comes into contact with almost every particle of the acid, and by uniting with it prevents its disengagement.

The watery solution which collects on the top of the tar, if in great quantity, may be poured off: if not, it is soon dissipated by the first ap-

plication of heat, and in dry weather its evaporation in the chamber of the sick has appeared to me to do good.

The tar to be employed ought always to be chosen as liquid as possible, and consequently the thick resinous part at the bottom of the casks ought to be rejected; for the resinous matter, and other impurities, when exposed to heat, produce an irritating fume or vapour.

Whenever a visible whitish vapour arises from the tar while boiling, it is a proof either that too much heat is applied, or that the tar contains impurities. In the first case the heat must be moderated, and in the second the tar must be thrown away.

An impure tar is soon discovered by its disagreeable odour on boiling; for any one, who has been once or twice exposed to the vapour of good tar, is immediately sensible of the great difference.

If a white smoke arises from the tar from overboiling, a violent fit of coughing is generally produced, and therefore the tar ought merely to simmer or boil with the lowest possible heat. In this case the whole air of the chamber becomes soon impregnated with the invisible vapour, and then, in the cases in which it is suitable, and

which have been fully described, it is breathed with ease and relief.

The same quantity of tar may be boiled until it becomes thick. It then ceases to yield the invisible vapour, and begins to afford the white smoke, or, in other words, the resinous part begins to be volatilized, which is of a very irritating nature.

Any attempt to cause a consumptive patient to breathe this vapour from a gasometer or bag is pernicious, both because it is in this case too much concentrated, and because the action of inhaling in this manner occasions too great an effort, and too much inflation of the lungs; circumstances which ought always to be avoided in cases of diseased lungs.

Until houses or establishments are constructed upon principles which admit of charging the whole or any given number of chambers with the vapour of boiling tar, or in fact with any other volatilized substance capable of acting on diseased lungs, no fair trial can be made, on a large scale, with such remedies. For, in the first place, the air must be changed, from time to time, in proportion as it becomes contaminated by the breath of the patient; and, secondly, the temperature of the atmosphere to be breathed

must not, in the greater number of cases, be, much cooler than that which was last breathed; and, thirdly, if too many patients labouring under purulent phthisis are confined in one room or ward, the air becomes poisonous to all of them, from the quantity of volatilized pus, and other animal matters.

In private practice, two adjoining apartments ought to be dedicated to the vapour, by which means each can be easily ventilated when necessary.

But the greatest obstacle to the success of the trials, both in public and private establishments, arises from the open chimneys, the situation of the doors, and the imperfect manner in which our windows shut, so that it is scarcely possible, in cold and windy weather, to keep any room equally charged with the vapour for a few hours together.

In private practice I generally select two adjoining rooms for the consumptive patient, and by shutting up the door of the bed-room which opens immediately on the staircase, and, in cold and windy weather, by causing all the windows to be completely shut, by pasting slips of paper around all the openings, the air of that apart-

ment at least becomes more easily charged with the vapour.

All ingress to that apartment takes place through the adjoining one, and as it is also warmed and charged with the vapour accordingly as the case requires, the patient enjoys, by means of these slight precautions, more uniformity of temperature, and a better regulated atmosphere, than could be procured in an apartment the doors and windows of which were not secured. But still as there is at all times in every room, in which there is an open fire, a current of air equal to that which escapes by the chimney, it is clear that neither the charge of vapour, nor the temperature, can be at all times quite equal.

The simplest way of charging the apartment with the tar vapour, is to put about a pint or upwards of the prepared tar into any flat dish of iron, copper, or earthen ware. This is to be placed on a stand about a foot from the ground, so as to admit a suitable lamp under it. I have of late caused an apparatus to be made exactly similar to that which is used for keeping the drink of patients warm, only of a larger dimension. These may necessarily be procured at any tinsmith's.

This apparatus must not be placed too near the patient at first, because it is impossible to say, beforehand, how it may affect him, and in what degree of force he can bear it. In whatever part of the apartment it is placed, the air is soon charged with the vapour.

In warm weather it is advisable to have the apparatus on the outside of the door, and the vapour to be admitted by means of a tube passing through it.

The best temperature for consumptive patients is from 60° to 65° of Fahrenheit's thermometer; but this, like every thing else in medicine, must be varied according to individual constitution.

So necessary, however, is the constant agency of an uniform temperature to the cure of all kinds of consumption, that a physician may despair of doing permanent good in most cases where this cannot be obtained. There are, indeed, a few to whom such minute attention, in regard to temperature, is not of extreme importance, but it is always useful.

It does not require any demonstration to show that an uniform temperature cannot be commanded in almost any house in this country, as at present constructed; yet not only consumptive

patients, but many other classes of delicate and infirm people, especially those of an advanced life, and who are subject to chronic bronchitis, ought to live in apartments, the temperature of which is equal in all its parts, so that the mass of blood be kept as much as possible on the surface of the body.

But in our houses, as at present constructed, and in the winter season, there is generally a difference of about thirty degrees of temperature between the heat in the face of those who sit around the fire, and that of the air which passes over their back and shoulders, so that, except they turn themselves often round for the sake of *compensation*, the excitability of the body is most unequally affected, being soon exhausted in front, and concentrated behind.

From what has been stated, it must appear that the chief *desiderata*, in constructing any establishment for the consumptive in such a climate as ours, are few in number, and yet of great importance. They may be reduced under the following heads:

1st. The possibility of charging, to any degree of concentration, all or any of the apartments with the tar vapour.

2d. A mode of ventilation which shall not ex-

pose the patient to a current of cold air during our cold seasons, or indeed at any time.

3d. The possibility of having one large ward or room always fully charged, and of a due temperature, to which patients can resort for exercise.

4th. The means of preserving an equal temperature in every part of the establishment to which the patients are admitted.

All these essential objects may be attained by means of two chambers in the under part of the house; the one being a reservoir of heated air, the other a reservoir of the vapour. From these tubes of communication may be easily conveyed to the different parts of the establishment.

The windows ought to be double, and two ventilators ought to be in each apartment: one in the centre of the roof, the other on a level with the floor. The first to allow the escape of superfluous heat, the second that of any heavy air. These are naturally to be opened only at times.

In the Quarterly Journal of Science, Literature, and the Arts, there is a good paper on the best means of ventilating houses and other buildings, by Mr. Charles Sylvester; and in the London Medical and Physical Journal there is a most

interesting paper, by the President of the Horticultural Society, F. Knight, Esquire, *on the method of preserving an equable and salutary temperature of the air of rooms for consumptive patients.* Mr. Knight relates the case of a young lady who was threatened with consumption from profuse hæmoptysis, and who from an alarming state of health was completely recovered by living in a room, the air of which was kept steadily at 60 degrees of Fahrenheit's thermometer.

CHAPTER XI.

General Precautions.

In every case it is necessary to begin with a moderate charge of the vapour of boiling tar, and to increase it gradually in strength.

When the expectoration is copious, when there is no pain or sense of tension in the chest, it almost always affords relief in the act of breathing, even on its first application; but if there be any inflammation present, or a very scanty and difficult expectoration, with long paroxysms of coughing, it is often a hurtful and always a doubtful remedy; and therefore, if found to induce any pain, dyspnœa, or dryness of cough, it ought to be desisted from.

Head-ache and increase of perspiration are common occurrences on the first administration of the vapour; but these are not motives for abandoning its employment, if it affords relief in breathing, or is not attended with any other bad symptom.

The vapour of the tar, and the necessary con-

finement to one or two apartments, the temperature of which is well regulated, render the patient very sensible to every impression of cold; and hence it is of great importance that he be confined for months together, during cold weather, to his apartments.

Upon the slightest appearance of hæmoptysis the vapour must be avoided.

In very dry weather it is useful to have a basin of wetted sand in the apartment, to supply moisture.

When the cough and other symptoms are relieved by breathing an atmosphere charged with the tar vapour, it ought to be increased in force twice or thrice a day for a few hours each time.

In the chronic tubercular phthisis, it frequently occurs, during the convalescence of the patient, that a new cluster of tubercles become inflamed, either as a natural event in their progress, or from accidental exposure to cold. This is always known by an aggravation of cough, with scanty expectoration. During this state of things I seldom apply the vapour but in the most diluted state. But when the tubercular mass is softened and begins to be expectorated, I again increase the force of the vapour.

In this variety of consumption, and in all others already described in the body of this work, in which the tar vapour does good, it occurs, when the disease of the lungs is once diminished to a great degree, and the patient is evidently returning to health, that he begins to feel a want of freer and cooler air.

When the weather is fine, I always indulge the patient in this, not only to satisfy his mind, and afford him some relief, but as a kind of test of his situation. As he gets better, the action of the air on the blood in the lungs seems to be necessary from time to time; but the greatest precaution must be observed to prevent him from catching cold. An attentive practitioner will soon discover when this is necessary, and how often it may be employed.

In hospitals, the number of consumptive patients who are to be admitted into any ward must be regulated by the mass of air. The fewer the number the better; for the air of the ward soon becomes loaded with the volatile parts of purulent expectoration, and a kind of poison appears to be generated by its presence and the temperature together, which not only increases the disease in the patients themselves, but is also dan-

gerous to the attendants. This is particularly the case with those patients who have extensive ulceration of the lungs, no matter whether from tubercles or from vomica, after peripneumony, or ulceration after hæmoptysis.

APPENDIX.

A TRIAL was made at Berlin with the vapour of boiling tar in pulmonary consumption in the hospital of the poor, known under the name of La Charité. The experiments were conducted under the immediate inspection of the king's first physician, Dr. Hufeland, and the first physician of the Charité, Dr. Neümann.

In Hufeland's Journal for 1820, part 1st, there is an account published of the trials, from which it appears that of fifty-four patients, labouring under pulmonary consumption, four were cured, six left the hospital in a state of convalescence at their own request, sixteen did not receive any benefit from the remedy, twelve appeared to get worse under the treatment, and sixteen died.

Those who know, say the learned authors of the statement, what the common mortality of pulmonary consumption is, will acknowledge that a proportion in which the fifth part had all their symptoms mitigated, and the twelfth cured, is encouraging, and surpasses the ordinary course of the disease.

They add, that the vapour increases the symptoms of inflammation; and that, therefore, it does not always agree with young people, nor with those who are en-

dowed with a very irritable fibre, with those who are of an inflammatory diathesis, nor with those who are disposed to hæmoptysis.

In the preceding work I have endeavoured to show under what limitations the vapour is to be employed; and I agree so far with Drs. Hufeland and Neümann, that it ought not to be exhibited when there is any fixed stitch or pain in the chest, hard quick pulse, great heat, and little expectoration.

They continue to observe, that with such patients as labour under a blennorrhœa pulmonum (phthisis pituitosa), the remedy succeeds best. That it has also been of great use to those who labour under the laryngeal phthisis; and they add a practical remark, which certainly does not coincide very well with their opinion as to the stimulating powers of the medicine; namely, that in cases where the pituitous membrane of the nose was inflamed to such a degree as to prevent the patients from breathing through it, the fumes of the tar produced a speedy and effectual resolution and cure of the thickened membrane.

I shall now translate from Hufeland's Journal a few of the cases of cure and amendment, that impartial judges may be able to form their opinions as to the real nature of the cases mentioned.

CASE I.

Charles Botchers, aged eighteen, a shoemaker's apprentice, was born of consumptive parents. One of his sisters was labouring under consumption at the time of

his admission. From his earliest years he was short-breathed; and at the age of twelve years he lost the faculty of hearing in his right ear, in consequence of cold. He had also been attacked with erysipelas in the face, which was followed by a cough and expectoration, but both these complaints ceased.

At the age of seventeen he was seized with a sore throat followed by diarrhœa. The first of these ailments never left him, and it was soon followed by hæmoptysis.

Three months after this accident, during a journey from Hamburgh to Berlin, he was attacked, for the second time, with a spitting of blood, which induced him to apply for admission into the Charité.

His appearance was similar to that of people who are disposed to pulmonary consumption. He was emaciated, had a hectic fever, pain in the throat, and a cough, with expectoration. The functions of his intestines were in their ordinary state. A small bleeding from the arm, and an emetic, produced some alleviation.

Two weeks after his admission he began the use of the vapour of tar; the hectic fever left him: but the remedy was continued a month and a half longer, when he was so much better as to leave the hospital.

He returned, however, on the 19th of August, with a cough, pains in the chest, expectoration, and night-sweats. He continued much in this state until the 16th of October, when he was again admitted into the tar chamber. Here his amendment was so rapid, that in a short period he was again allowed to quit the hospital, at his particular desire; a slight cough however still continued.

CASE II.

John Wolkerla, aged forty-eight, was the son of a consumptive father, and had been short-breathed from his childhood.

In the spring of 1817 he was attacked with coughing and expectoration, streaked with blood. This was followed by nocturnal sweats, and a rapid loss of flesh. The matter expectorated had at times a putrid taste, at other times a saltish one. He could not sleep on the left side, and he had an oppressive pain under the sternum. The functions of his intestines were in their natural state.

This patient remained in the tar chamber from the 28th of July to the 29th of August, and, although his fever appeared at times to be increased, nevertheless the general amelioration of his health was complete, and he was at last dismissed quite cured.

CASE III.

Dorothea Schutz, aged twenty-five, not emaciated, and of great nervous sensibility. She was of a pale complexion and delicate make.

In the month of January, being then in the middle of her pregnancy, she was seized with a violent cough.

After her delivery, at full term, her cough became much worse, and was accompanied with great expectoration, and this was followed by hectic fever.

She was received into the tar vapour chamber on the 25th of September, and on the 22d of October the hectic

fever had left her, the expectoration was diminished, but the cough continued. Finding herself better, she did not choose to remain in the hospital, and was dismissed.

CASE IV.

Frederica Raven, aged twenty-three, about a month before she applied at the Charité had been seized with a hoarseness of voice, a cough, and expectoration, and all the symptoms of laryngeal phthisis.

On the 26th of March, 1818, she was admitted a patient of the hospital. Her disease went on increasing until the 3d of June, and that to a degree that her expectoration was puriform and sanguinolent.

At this period she was received into the tar vapour chamber, where she remained until the 22d of October, when, being almost entirely recovered, she desired to leave the hospital.

CASE V.

John Nauman, a shoemaker's apprentice, aged twenty-five, had been labouring two years with a cough. The quantity of matter which he expectorated daily exceeded a quart, and had a most offensive smell. Every symptom of hectic fever was present, and at times he suffered from pains in his breast. Such was his situation when he was admitted into the Charité, on the 16th of September, soon after which he was seized with the itch. But before this occurred he was admitted into the tar vapour ward, where he continued until the 5th of November, when,

being greatly improved in health, he left the hospital, at his particular request.

CASE VI.

John Schukmann, aged forty-nine years, became consumptive after an imperfectly treated peripneumony. He was admitted on the 20th of July, and continued in the tar vapour ward till about the middle of November. He got well in this time, so that every symptom of disease left him, and he was dismissed fully cured.

CASE VII.

Fabian Hartung, aged forty-eight years, was admitted into the tar vapour ward the 25th of September, where he continued until the 18th of November. On his admission, his complaints were great dyspnœa, under which he had laboured, more or less, for sixteen years, a cough, with expectoration of a thick, heavy, stinking mucus, hectic fever, nocturnal sweats, and impossibility of lying on his right side.

All these symptoms left him, and he was dismissed cured. Beside the tar vapour, he took internally the semina phellandrii aquatici, with sugar of milk.

In a letter which I received from the respectable and learned Hufeland, dated the 29th of August, 1822, he says, "Experiments with your tar vapour continue to be made in the Charité, and also by me in private practice.

In phthisis atonica, and especially in the phthisis trachealis, it has produced the very best effect, but not so in the phthisis florida.

"One of my private patients, who fell into a state of phthisis purulenta after peripneumony, and with whom the most efficacious remedies had been tried in vain, began to exhibit signs of recovery on being constantly confined to an apartment charged with the tar vapour, and by its means the cure was at last completed."

FORMULÆ.

No. 1.

℞ Antimonii sulphureti præcipit. gr. ss.—gr. iv.
Sacchar. purificati, gr. viij. m.
fiat pulvis, mane meridie et vespere quotidie sumendus.

2.

℞ Antimon. sulphureti præcipit. gr. i.—gr. iv.
Hydrargyri submuriat. gr. ¼.
Sacchar. purificat. gr. viij. m.
ft. pulvis mane et vespere quotidie sumendus.

Remark. When calomel is to be employed in combination with the red sulphuret of antimony, I generally order the compound powder to be given for four days together; then the powder, No. 1, to be given for as many days, and so on alternately; my object being to avoid the risk of any unexpected mercurial action, except of the very lowest kind.

3.

℞ Decocti sarsaparillæ, ℥iij—℥ij.
Sodæ subcarbonat. gr. iv.—gr. x. m.
ft. haustus ter quotidie sumendus.

Remark. If the sarsaparilla be not of the best quality, and boiled for a long time, the physician will be always disap-

pointed in his expectation. The prescription of the London College for preparing this decoction is excellent, and ought to be rigidly followed.

In very weak stomachs it sometimes occasions a sense of weight and uneasiness. This is prevented by giving it moderately warm, and by adding a small quantity of any mild bitter to it.

The smallest quantities of the medicines prescribed in Nos. 1, 2, 3, refer to the youngest periods at which tubercular phthisis begins to declare itself. The larger doses may still be increased.

4.

℞ Stipit. dulcamaræ concis. ʒij.
Aquæ ℥x coque per quartam horæ
partem et postea macera per horas duas: dein cola.
℞ Liquoris colati, ʒij—℥ss.
Decoct. sarsaparillæ, ℥ss.—℥ij.
Sodæ subcarbonat. gr. iv.—gr. x.
Sacchar. purificat. ʒss. m.
ft. haustus 4^ta^ vel 6^ta^ quâque horâ sumendus.

5.

℞ Haustûs ut supra præscripti.
Decocti lichenis āā ℥ss.—℥j. m.
ft. haustus ter quotidie sumendus.

Remark. I am sorry to be forced to remark, that in almost every case in which I have ordered the Iceland moss in substance for the poorer class of patients in this country, it has been of so very inferior a quality, and so contaminated with other mosses, as to have been useless.

There are two varieties in the market. The best kind is, of a horny texture, and yields a bitter mucilage. It is that which comes from Iceland, Norway, Sweden, and Finland.

The inferior kind is more of a membranous texture, and yields little bitter or mucilage, compared with the former. Where it comes from, I know not; but I suspect it to be British, as it is much cheaper than the other. This last ought to be entirely rejected, as it leads to uniform disappointment.

6.

℞ Ext. conii, ℈ij.
Mass. pilul. galbani comp. ʒj.
Pulv. antimonial. gr. x—gr. xv.
Opii puri, gr. v. syr. q. s. ft. massa.
In pilulas xl dividenda.
Dosis i—iv. ter quotidie.

7.

Antimonii sulphureti præcipit. ℈j.
Hydrargyr. sulphuret. rubri, ʒss.
Ext. conii, ℈ij.
Pilul. galban. comp. ʒj.
Opii puri, gr. v.—gr. xij. syr. solut. q. s. divide in pilul. xxx.
Dosis i—iij ter quotidie.

8.

℞ Pilul. hydrargyr. ℈j.
Antimon. sulphuret. rubri, gr. xvj.
Ext. conii, ℈ij.

Pil. galban. comp. ʒj.
Opii puri, gr. v. syr. q. s. divide in pilul. xxx.
Dosis ij—iv. ter quotidie.

9.

℞ Decocti hordei comp. ℥iss.
Liquoris antimon. tartar. ʒj.
Magnes. sulphat. gr. xij. ft. haustus tertiâ quâque horâ sumendus.

Or, Half an ounce of the liquor antimonii tartarizati to be added to a quart of good barley-water, of which half a cupful is to be drank every hour, or hour and a half.

Remark. In the acute stage of tubercular phthisis, in which Nos. 8 and 9 are chiefly useful, the common saline diaphoretic may also be employed for a limited period with advantage.

The decoction of althea root may be substituted for the barley-water.

At this period of the disease, or rather a little later, when the hardness of the pulse and hurried respiration have been subdued to a certain degree, I have derived considerable benefit from the expressed juice of coltsfoot, half a cupful of which, with or without the liquor antimonii tartarizati, according to circumstances, is to be taken twice or thrice a day.

This medicine, so much and in my opinion justly praised by Fuller, in his Medicina Gymnastica, p. 87, et seq. I have also found of very great benefit in chronic bronchitis.

The bitter and astringent principle which it contains is in such small proportion as to do no harm, except the most active inflammation were present.

10.

Hydrargyr. sulphuret. præcipit. gr. iij—gr. vj.
Pulv. antimonial. gr. j—gr. iij.
Potassæ nitrat. ℈ss.
Sacchar. purific. ℈ ij. m. ft. pulv. 6ta quâque horâ sumendus.

11.

℞ Antimon. sulphuret. præcipit. gr. j—iij.
Ext. hyoscyami, gr. ss.
Ext. papaveris, gr. iij. ft. pilula, 4ta quaque horâ sumenda.

℞ Pulv. fol. digitalis purp. gr. ½—gr. iv.
—— antimonialis, gr. j—iij.
Sacchar. purificat. ℈j. ft. pulv. ter quotidie sumendus.

Remark. In almost every case where any narcotic medicine, except opium, is employed in combination with antimony, for the purpose of subduing scrophulous inflammation, the narcotic ought to be increased in quantity every second day, until it produces its specific effects on the brain or heart.

These effects often seize the patient very suddenly and unexpectedly, especially when the digitalis is employed, and it is therefore an useful advice to proceed with caution.

Although the digitalis purpurea has been too much praised by the late Dr. Beddoes, and by Dr. Drake, and consequently has led to frequent disappointment, yet it must be admitted that it is an excellent medicine as an auxiliary in a number of cases, especially where there is great quickness of pulse.

Mossman's opinions concerning digitalis are more impartial and correct than those of Beddoes; and it is my opinion that if Dr. Mossman had not confined many of his patients too rigidly to a very low vegetable diet, he would have been more successful; for where any good is to be done in tubercular phthisis, whether acute or chronic, the scrophulous constitution of the patient must never be lost sight of.

When the tubercular inflammation is extensive, and occupies the pleura, forming what might properly be called the scrophulous or tubercular pleurisy, and when any part of that membrane has produced an effusion of pus and serum between the ribs and lungs, the digitalis never does good, and generally produces indescribable anxiety by its paralysing powers.

12

℞ Succi limonum, ℥ss.
Potassæ carbonat. q. s. ad saturandum.
Decoct. sarsaparillæ, ℥ss.—℥j.
Tinct. digitalis purp. min. x—xxx.
Mucilag. acaciæ, ʒj.

ft. haustus 6ta quâque horâ sumendus.—In acute tubercular phthisis.

13.

℞ Ext. conii, ʒss.
—— papaveris, ʒj.
Antimon. tartariz. gr. v.
Confect. rosæ, q. s. ft. massa, in pilulas, No. xxx dividenda.

Dose.—One or two to be taken three or four times a day, according to circumstances.

one or both parents, the female parent having more influence, as far as my observation goes, in transmitting this constitution than the male one.

It not being my intention to enter fully into the history or nature of scrophula, but to confine myself to observations relating to mere practice, and chiefly to the cure and prevention of consumption, as arising frequently from this source, I shall limit myself at present to the consideration of only one of the causes, but which has the greatest influence in augmenting the frequency of scrophulous or strumous consumption in this country.

The consideration of the facts relating to this subject is of great interest to the preservation and recovery of consumptive patients. It is lamentable to think how much the simplest deductions arising from this analysis, although leading to the most useful results, are neglected, not only by a great number of medical men, but also by consumptive families, who, notwithstanding the recommendation of many excellent physicians who have written on the subject, adopt old errors without the slightest examination.

Consumptive patients are still sent to Nice, to the north of Italy, to the south of France, to

Naples, to Cintra in Portugal; all which places are destructive to these unfortunate people. They are made to undertake sea voyages at improper seasons, and without due precautions; and in this country they are often sent to the sea coast, notwithstanding all that daily experience teaches.

Being aware that certain truths must be frequently repeated before they produce due conviction on the mind, and deeming the subject of the very highest importance to the happiness of many families, I cannot refrain from taking part with those who have endeavoured to direct the attention of medical men and the public to this particular inquiry, and of adding my testimony and opinion to theirs.

Consumption is infinitely more frequent in Great Britain and Ireland, in comparison of their population, than in the northern parts of Russia, yet the climate of Russia is in general infinitely colder and ruder than ours. The scrophulous or strumous constitution is more common in the northern and middle governments of Russia than in England, and commits greater ravages and disfiguration than are ever witnessed in this country. Great Britain nowhere exhibits such dreadful effects of scrophula as Russia

does; but in that empire its attacks are mostly confined to the external set of glands, to the face, the eyes, and throat, and to the bones, especially those of the extremities: the lungs suffer rarely, except in public schools, and among those who adopt the European dress and fashions.

It is asserted that the Russian peasant lives better than the labourers of this country; but the very reverse of this is the case. He ought, indeed, to live much better, from the quantity of land he possesses, and other advantages he enjoys; nevertheless the difference of diet may have considerable influence in rendering him less liable to inflammatory complaints. The chief food of the Russian peasant is a black sourish rye bread, which is nutritive, though less so than wheaten bread, and along with this a very weak cabbage soup. Almost all his drinks are acidulous and fermented. During his long fasts, he is reduced to eat black bread, bad hemp oil and vegetables, to the total exclusion of every article of diet derived from animals, whether flesh or fish. Even milk, as belonging to animal matter, is strictly prohibited during the fasts, which are very long. This is not a diet either to prevent or mend a scrophulous

habit; but, on the other hand, the lungs are never overloaded with blood, or over stimulated by it.

The great mass of population in Russia, the peasantry, are always warmly clothed, except in the excessive heats of their short summer, and their huts are insupportably hot during winter, spring, and autumn, in comparison with our houses. High and frequent winds, one of the richest sources of catarrhal and consequently consumptive cases in this country, are very rare in the northern parts of Russia: and when they occur, every Russian who has it in his power shuts himself up; and as the peasantry of both sexes are clothed in sheep skins, with the fur turned inwards, they are not quickly robbed of their atmosphere of heat on leaving their huts, and consequently can bear almost any transition of temperature with impunity. The lungs alone are exposed to the cold; but the great mass of blood is not thrown on these viscera by sudden exposure to it, as it is in this country; and the circulation being kept up freely on the surface of the body, and in the extremities, no injury arises.

The nobility and higher classes in Russia, especially those who inhabit the two capitals, and the larger cities, who have adopted the Eu-

ropean dress and usages, and are under all the tyranny of European fashion as to late hours and other irregularities, to whom may be added the military of Russia, are becoming every day more and more subject to consumption.

"Few or none of the Danes," says Lord Molesworth, "are troubled with coughs, catarrhs, or consumption, or such like disorders of the lungs." His lordship atributes this to the warmth of their apartments, and to their not burning coals. This last is merely an imaginary cause. The warmth of their apartments, of their dress, the equal temperature of their rooms, and the total absence, as in the Russian houses, of those vortices and currents of cold air which circulate with such freedom in English stair-cases and English houses, explain the whole.

In Lapland, as we are informed by the celebrated Linné, where similar securities against cold and sudden transition of temperature prevail, consumption is extremely rare. These facts, if well considered, lead to this conclusion; that the best preservative against pulmonary complaints is warmth, and an equal, or at least an uniform mild temperature, so as to keep the balance of blood constantly on the surface.

In France, where the mean temperature of

cold in winter, and of heat in summer, is greater than in Great Britain, consumption is rarer, which can only be reasonably explained by the greater steadiness of the seasons in France.

The steady climates of Italy and Spain, compared with ours, are the chief cause why consumption is less common in them. Still these fine climates are by no means free from the disorder, numerous cases of consumption occurring in them, but always diminishing in proportion to the steadiness and uniform warmth of the respective climates. None of these countries are altogether free from vicissitudes of temperature; and those to which consumptive patients are commonly sent from this country are exposed, during hot seasons, to sudden cold and cutting winds, from the glaciers and high mountains in their neighbourhood, which alternating with siroccos and hot winds, soon cut short the days of a consumptive patient. The whole of Dauphiné, almost the whole of the south of France, the north of Italy, and indeed all places which are under the influence of cold winds from the Alps, Appenines or Pyrenees, are subject to phthisis, and destructive to foreigners labouring under that complaint, or who are disposed to it from diseased and weak lungs.

If the inhabitants of these fine countries had habitations suited to the bad weather to which they are now and then exposed, or could change their dress as soon and as often as the cold winds blew, there would, I believe, be very few cases of consumption among them. In countries most subject to consumption, the spring and autumn are in general the most hurtful seasons, not only in inducing the disposition, but in accelerating the progress of the disease, because the vicissitudes of temperature are more common in those seasons than in others.

It may be suggested that the general mortality in Great Britain is much greater in the autumnal, winter, and vernal months than in summer, and that therefore the increase of deaths by consumption in these months is owing to an influence which affects all diseases. But it will be found, on examination, that the deaths by consumption are greater in proportion during these months, than by any other disease; and in regard to the rest of Europe, the seasons which are the most variable in temperature, or the most subject to cold and high winds, are always, *cæteris paribus*, the most fatal to consumptive families.

Many parts of Scotland, the north of England, and Wales, are, from local situation, more in-

jurious to consumptive people than the rest of the island. Such places, for instance, as lie between ridges of mountains, which, instead of affording shelter from the north-west, north, or north-east winds, form gullies and funnels, along which these winds blow frequently and often boisterously (and this comprehends some of the most beautiful and romantic spots in the island), are peculiarly hurtful to consumptive people; it is in vain to hope to save them in such situations.

All high situations are injurious to the consumptive, not only on account of their being generally more exposed to cold and high winds, but because the diminished gravity of the atmosphere disposes such patients to hæmoptoe.

The sea coast, to which so many pulmonary victims are sent, is highly injurious to them, let the situation be where it may, whatever be the variety of the disease, provided ulceration be present; but where no real ulceration has taken place, as in the phthisis pituitosa, or that arising from neglected bronchitis, it now and then does good.

Some places on the coasts of Devonshire and Cornwall, such as Penzance, have been long considered as favourable to the recovery of the consumptive. If the fact be well founded, which I

am much inclined to believe it is, the reason is to be sought for in the steady, mild, and perhaps humid state of the atmosphere of these favoured spots, but most assuredly not in any specific virtue of the sea air. The inhabitants, the natives I mean of Madeira and Minorca, are said to be free from the disease we are treating of; but this does not prove that these islands are good residences for those in whom the disorder is declared. Of the many who are sent to Madeira for recovery, scarcely any return; yet it would be a good residence for correcting the mere tendency to consumption, provided tubercles were not already formed in the lungs, or only beginning to be formed. Penzance, in Cornwall, would be nearly as favourable to some but not to all; for of consumptive patients some agree with a moist atmosphere, while others are hurt by it. I am convinced, however, from all I have observed, that an uniformly steady and warm temperature, whether natural or artificial, may prevent the formation of tubercular phithisis in those who most assuredly would fall a sacrifice to it in a less favourable temperature.

Very hot climates, remarkable for their great constancy of seasons, are known to be quite free from consumption; such, for instance, as Persia,

and many parts of Calcutta; and it is of very rare occurrence in some of our West India islands. Chardin, and other travellers, assert that consumption is quite unknown in Persia. Fryer, in his travels through Persia to Hindostan, takes particular notice of the endemic diseases of the countries through which he passed, and he makes no mention of consumption. Dr. J. Hunter, Lempriere, and Bryan Robinson, all concur in stating, that in Jamaica phthisis pulmonalis is a very rare disease: but every hot country is not equally favourable; for consumption is well known on the Madras establishment, and in the greater part of Spain and Portugal, because these countries are exposed to great, sudden, and frequent vicissitudes of heat and cold.

A moist atmosphere is not in itself, and because of its moisture, injurious to the consumptive. On the contrary, there are many reasons for believing that a warm and moist atmosphere is exceedingly beneficial to them. The fenny parts of Lincolnshire are said to be more free from consumption than any other part of this island; and the circumstance, from being too much generalized, has given birth to an idea that all places which are subject to ague from marsh effluvia are also

favourable to consumptive people. Dr. Wells, in a very ingenious essay in the third volume of the Transactions of the Medical and Chirurgical Society, has brought together a great mass of testimony in favour of this opinion; but in an excellent treatise on consumption by Dr. Southey, who exhibits great impartiality and judgment, he has adduced the testimony of respectable physicians and medical practitioners living in the neighbourhood of marshy grounds in Essex, who, from their experience, contradict the doctrine; and indeed it would be very difficult to imagine that cold and moisture, and the deleterious poison of marshes, should be securities against such a disorder as consumption. But many fenny places are much sheltered from cold winds; and provided the air of such places be loaded with moisture alone, or only with a little carburated hydrogen, I can imagine that they may be favourable to the consumptive. The effluvia and volatilised substances, arising from the decomposition of animal matters, is always useful to people of weak lungs, and to the consumptive. Cat-gut-makers, who live in a putrid atmosphere, and butchers, are of all tradesmen those who are the least frequently affected with this disease.

Dr. Withering, in a letter to Dr. Beddoes, takes

particular notice of this fact. Dr. R. Pearson states the same thing; and Mr. Creasy of Bath, who is said, by Dr. Southey, to have taken great pains to collect facts on this subject, declares that phthisis and all forms of scrophula are rare among butchers. Allowing this last observation, which is substantiated by such respectable testimony, to be perfectly correct, and from all the inquiries I have made I believe it to be so, the security of this class of men from scrophulous consumption must not be attributed solely to the atmosphere which they breathe, but also to their enjoying a better diet than the generality of the lower classes of men. Butchers' apprentices in England live in general on good hot broths, and hot meat. Compare this with the food of the labouring peasantry in the highlands of Scotland, and in almost all its islands, consisting of a bottle of whey, some oaten cake, now and then a little skimmed milk, cheese, and a few onions; to which add the inclemency of their climate, and the insufficiency of their dress; and it will be easy to explain what Sir John Sinclair asserts, that scrophula and consumption are frequent in these parts. *See his Statistical Reports, vol. 4, p.* 481.

Englishmen, with a most meritorious and praiseworthy patriotism, find a eulogy for the climate

of Great Britain, by saying, that it is one of the very few, in which one may walk out every day of the year with very little change of dress; and certainly the vicissitudes of temperature, although more frequent than in many countries of the same latitude, are not so great as to prevent a healthy person from walking in the open air without any great precaution from change of dress: but it must surely strike every reflecting mind, that in regard to the effects of our climate on consumptive people, it is not so much the thermometrical temperature of any place, as meteorological causes, such as high winds, and wind and moisture combined, which are of importance: for although they may produce no change in the thermometer, they rapidly rob the body of its heat, and most probably of its electricity also. Whether this explanation be admitted or not, what is most certain is, that they are very injurious to the consumptive; and it must, I suspect, be admitted by every candid traveller, that there is no country in Europe more subject to sudden currents and torrents of air than Great Britain and its sister island. Scarcely a day passes, during ten months out of the twelve, in which there is not a change in the force and direction of the winds. A fine, serene, and mild morning, or noon,

engages the poor invalid to venture out and breathe the air; yet, ere he has accomplished half his ride or walk, he is overtaken by wind, rain, or both. A great distinction therefore is to be made between the general temperature of a climate, and the stability of a climate, in a medical point of view. The mean temperature, for instance, at Paris and at Edinburgh is nearly the same during the colder months of the year; yet consumption is much more frequent in the latter than in the former place. There are indeed few places in the world more calculated to produce consumption than the beautiful capital of Scotland, and the whole valley of the Forth.

That the consumptive constitution is in a state of progressive increase in this island, cannot, I think, be denied by any one who consults the bills of mortality for the last half century; and I take the liberty of referring those who are desirous of examining this matter to an excellent work on the subject, published by Dr. Woolcombe. *See his Remarks on the Frequency and Fatality of different Diseases, &c. London,* 1808.

In order to form a just estimate of the value of any climate or particular spot, as a residence for the consumptive, or those who are threatened with it, a series of topographical observations

ought to be made by competent persons, not only concerning the mean temperature and the dryness or moisture, but the extremes of temperature for each month during a series of years, also the prevalence, force, and direction of winds, the frequency and kind of fogs, &c.

Although high and strong winds have a more baneful influence than a much colder atmosphere without wind, inasmuch as a weak and delicate person will be sooner robbed of his heat, and disposed to catarrhal affections by the first than by the second; and although it be extremely interesting to know if any place be peculiarly exposed to such causes of disease, yet it is by no means necessary to have any very minute measure for this. The observation of any judicious and accurate observer, and the common expressions which are employed concerning climate, would be quite sufficient for the practical physician.

To such a series of meteorological observations is to be added others, on which practical men would place still greater reliance, although to the rigid matter-of-fact philosopher—such testimony would perhaps appear to be of an unsatisfactory and dubious nature,—I mean a comparison of the bills of mortality of each parish

throughout the kingdom. This, were it well done by a sensible and competent person, would be a very valuable document, not only for physicians in general, but for a great variety of invalids beside the consumptive. A very short extract from Dr. Woolcombe's work, already quoted, will show the value of it in regard to the disease we are treating of, provided it were more extended. At Bristol, 10 die of consumption out of 24; at Warrington, 10 out of 30; at Shrewsbury, 10 in 40; at Plymouth, 10 in 43; at Ackworth, 10 in 43; at Holycross, in Shropshire, 10 in 50; and at Chester, according to Hayorth, 10 in 54.

There are, doubtless, both in this, and the neighbouring island, many places and spots which are peculiarly sheltered from all strong winds, and especially from the north-east and north-west winds, which, although less frequent, and generally less violent, than the south-west winds, do much more harm.

These are the proper places to form establishments for the consumptive in this country, and they are also the proper residences of families and young people who are disposed to phthisis. It would be rendering an essential service to medical

men, if such places were described and pointed out, which might easily be done by communications to some of the medical journals.

In Dr. Young's learned work on consumption, he says, "that the greatest possible equality of temperature seems to be obtained in a sea voyage to a warm climate."

Of the great number of consumptive patients who have been sent on voyages, by far the greater number have had the progress of the disease accelerated during the voyage; and when one reflects on the various kinds of physical injury and distress to which such patients are exposed on board of ship, arising from bad weather and mere local causes, before they reach a steady and warm climate, and the inconveniences attending any voyage by sea—there need be no wonder at the frequent disappointment it affords. If the weather be bad, the patient is either half suffocated with smoke in the cabin, or oppressed with various smells and bad air, or exposed on deck to cutting winds, rain, and cold, and by far too free an air for ulcerated lungs. Long continued sea sickness, instead of doing good, reduces his strength most rapidly; his food is seldom such as is proper, and it is dressed to disgust a weak and freakish

stomach. So far from its being true, that the motion of a ship is preferable to that on a rough road, one need only read the very interesting case of Dr. Currie, during his consumption and hectic fever, to be convinced of the contrary; and if damp sheets are frequently met with in good inns, which I believe seldom happens in England or in France, damp clothes of all kinds are unavoidable at sea, and in stormy weather they can seldom be dried. When to these is added, the separation from the dearest relatives, the impossibility of receiving those attentions and comforts which are to be met with at home, and the recollection that on board of ship all the friends and servants of the sick person are generally incapacitated by sea sickness from giving a minute and constant attention; a physician ought to hesitate before he sends a consumptive patient out of Great Britain. The cases which I have known to derive benefit from a sea voyage, have been those where chronic bronchitis has been mistaken for consumption. In the former of these diseases it is certainly useful. In a few cases of threatening consumption from hæmoptoe, I have also known it to be of great use; but in others, the violent straining, occasioned by sea sickness, has induced such hemorrhages from the

lungs, as seemed to shorten the life of the patient; and in such cases it is therefore to be considered as a doubtful remedy. In almost every case of advanced phthisis, where sea sickness has been long continued, and the patient consequently exhausted by this accident, and the necessary privation of food, it has appeared to me, judging by the information I received, to have done harm.

Justice requires that I should add that many physicians, from the earliest times, have recommended a sea voyage in consumption. Celsus has done so; but that truly great and judicious physician recommends it in the only period where it does any good; namely, in the beginning, and before the strength is impaired. "Quod si mali plus est, et vera phthisis est, *inter initia* protinus occurrere necessarium est: neque facile enim hic morbus, dum inveteraverit, evincitur. Opus est, *si vires patiuntur,* longa navigatione, cœli mutatione, sic ut densius quam id est, ex quo discedit æger, petatur. Ideoque aptissime Alexandriam ex Italia itur." lib. iii. c. 22; and immediately afterwards he prohibits long voyages, (meaning always by a long voyage from Italy to Egypt) where there is much weakness. "Si id imbecillitas non sinit, nave tamen, sed non longe, vectari commodissimum est."

The view which has been taken of the influence of climate and temperature, shows on the one hand how very little is to be expected from either topical applications to the ulcerated lungs of consumptive patients in Great Britain, or from internal remedies, if some plan be not adopted to shelter the patient, during his recovery, from the frequent vicissitudes of temperature to which we are subject; and on the other hand, the cases brought forward justify the hope, that with the advantages of an artificial and equal temperature, and due regard to diet, exercise, and internal means, the efficacy of the vapour of boiling tar on ulcerated lungs, might rescue many lives which must otherwise be lost.

CHAPTER III.

On Tubercular Consumption, its Prevention and Treatment.

OF all the varieties of pulmonary consumption, that which arises from tubercles or scrophulous secretions, and depositions in the substance of the lungs, is acknowledged to be the most prevalent in this and in all similar climates. With the exception of that consumption which arises from the ulceration of the cartilages of the larynx, it is considered as the most intractable and fatal. That it is generally so there can be no doubt; for on the one hand, a highly scrophulous temperament or disposition is of itself so incurable an evil, and on the other hand, it is so much increased and supported by our climate that the power of medicine, however judiciously exerted, cannot, in a great number of cases, overcome their united influence. But that a scrophulous disposition, and the formation of tubercles, may be averted by great and assiduous care during infancy and growth, and that many

cases of real tubercular phthisis are capable of complete cure, I am authorised in asserting.

Before proceeding further, it seems necessary to observe, that although I use the expression scrophulous depositions, I by no means take it upon me to decide whether, in all cases, they are truly a matter secreted, or whether they are not in some cases diseased glands; for although they have not the appearance of glandular bodies, and are found where no absorbent or lymphatic glands have been discovered, in a state of health, yet this is not an absolute proof against the doctrine of their being so. We have innumerable instances of small glands becoming sensible to the eye and touch in places where they were not to be discovered by any natural or even artificial means, before their seemingly sudden appearance. How often, in cutaneous diseases, do we not meet with small painful glands in the skin, where none were suspected to exist until then!

The tubercles have been well and minutely described by Dr. Baillie and by Messrs. Bayle and Laennec, all of whom, however, agree that they are not glands, but a matter apparently secreted or deposited by vessels.

They are at first as small as mustard seed or

millet seed, and are generally of some shade of a grayish colour. As they increase in size, they acquire a yellowish hue, and are opake, and of a cheesy or rather curdlike consistence. At last they unite, forming larger masses, and consequently destroying the healthy texture of the lungs. The infiltration generally goes on, until considerable portions of the lungs become one mass of indurated matter, having a kind of grayish and semitransparent aspect, and these parts are dense and impermeable to air.

After the lapse of an uncertain period of time, says Mr. Laennec, and this it is most important to keep in mind, the tubercles become first softened and finally liquefied. This change, he asserts, commences in the centre, and gradually extends itself to the circumference.

"In this stage," he adds, "the tuberculous matter is of two different kinds in appearance; the one resembling thick pus, but without smell, and yellower than the immature tubercle; the other a mixed fluid; one portion of it being very liquid, more or less transparent, and colourless; (unless tinged with blood) and the other portion opake, of a caseous consistence, soft and friable. In this last condition, which is chiefly observable

in strumous subjects, the fluid perfectly resembles whey, having small portions of curd in it.

"When the softening of the tuberculous mass is completed, this fluid finds its way into some of the neighbouring bronchial tubes; and as the opening is smaller than the diseased cavity, both it and the latter remain of necessity fistulous, even after the complete evacuation of the tuberculous matter. It is extremely rare to find only one such excavation in a tuberculous lung. Most commonly the cavity is surrounded by tubercles in different stages of their progress; which as they successively soften, discharge their contents into it, and thus gradually form those irregular and continuous excavations so frequently observable, and which sometimes extend from one extremity of the lungs to the other."

Thus much of Mr. Laennec's description of tubercles I have taken the liberty of copying, deeming it necessary, lest his work should not be in the hands of every one who may happen to peruse this treatise, and that a correct notion may be formed of the real nature of the disease in its commencement and progress.

These tubercles occur most frequently in the

upper lobes of the lungs, but in highly scrophulous constitutions, they are often met with in every lobe.

The period of their first formation is various in various individuals. They have been found in the lungs of newly born infants. They have been formed, for the first time, in some people of a very advanced age; but the most common periods are from the age of puberty, or soon after, until the fiftieth year in this climate, where the constitutional disposition is strong; and other accidental causes, such as frequent exposure to cold, and errors in diet co-operate; and in those who have less constitutional tendency, but are unhappily exposed to the frequent urgency of some of the common remote causes, the strumous disposition is at last formed, and breaks out at any period of life whatever, but most commonly between the twentieth and fortieth year of life.

To begin with those who unfortunately are born with a strong hereditary disposition to scrophula, I divide them as objects of practice into two classes.

Of one of these classes, the individuals when born, and to all appearance during the first years of infancy, are well proportioned and well

formed; and until they begin to be weakened by growth, and by accidentally debilitating causes, such as prejudice, and the love of some injudicious system on the part of the parents, often produce among the rich, or such as indigence always produces among the poor—there is nothing in the outward appearance of the child to distinguish it from the general class of those who are healthy. The knowledge that one or more of his parents, or his family, have died consumptive, is the only circumstance to create uneasiness in the minds of his relatives.

The other class consists of individuals of a delicate frame, who are soon observed during growth to have flat or compressed chests, transparent skins, long and prominent necks, and a general indication of weakness, which, when combined with hereditary influence, mark them out as unceasing objects of anxiety and attention. The number of such children is gradually increasing in this, and in all northern climates; they are seldom found in very warm and temperate climates, except as the accidental offspring of weakly, old, or very unhealthy parents.

The first class of scrophulous children (such I mean as have a well formed skeleton, plenty of flesh and blood, and a healthy colour) may yet

have great vascular weakness in one or more parts of their system, disposing them to glandular and to membranous inflammation; but notwithstanding this, it is seldom that such subjects fall a victim to consumption, except through great ignorance or neglect on the part of their parents, or such occupations as their situations in life or their necessities expose them to.

The idea of making such children hardy, by a kind of Spartan education, such as dressing them lightly, exposing them to all kinds of weather, plunging them daily in a cold bath, has been the source of mortality among some, and of lasting infirmities with many others of these young people. These are the first of many errors which I deem myself authorised to censure.

It is almost in vain to talk to some parents concerning the impropriety of such conduct. The specious, but false opinions of those who think that the constitution of every child may be made to ply according to their will, and that it may be hardened, during the first years of growth, by being exposed to all weathers, however thinly dressed, have much more weight with people of a warm and fanciful imagination, or those who think it is a character of genius to depart from

common rules, than any length of experience can pretend to.

It happens unfortunately, that a physician of plain understanding, with experience on his side, seldom has sufficient patience to listen long to systems built on false analogies, and wrong or limited notions of human nature; and the unhappy victims are therefore abandoned to trials of cold air, cold bathing, and thin dress, until some alarming change in their health and appearance announces the mischief which is going on within.

But in justification of many parents, I must confess, that the practice of bathing all children, without distinction of constitution, in cold water, during the early periods of infancy, was, until very lately, a general plan, even among a great part of the faculty. It is not more than about twenty years ago, that physicians of eminence recommended this as the best means of improving the strength and constitution of weakly and scrophulous children; and many went so far, as to order the patients to be dipped during the winter in water which had been slightly frozen.

Submission to a prevailing opinion, and to high authority, made young practitioners follow

the same rule for some time, until the bad effects of the practice became too evident to allow of its being pursued.

A strumous or scrophulous constitution is always increased by languid circulation; and in those who are very weak, the chill produced by cold bathing, instead of being immediately followed by heat and animation, not only continues for a considerable time after the patient quits the bath, but is succeeded by cold extremities, palpitation of the heart, contracted features, head-ach, dyspnœa, and every symptom of internal congestion and want of a free circulation. These are most injurious effects, and ought to act as a warning to desist from the practice. Glandular swellings and membranous inflammation are its almost inevitable consequences in such constitutions.

It is true, that some scrophulous children of a more robust character may employ the cold bath throughout the year with impunity, and always with utility during hot weather; and it is also true, that good warm apartments, warm dress, and plenty of good food and exercise counteract the evils alluded to. This is the reason why particular cases are often brought forward to prove

the beneficial effects of bathing all children, without almost any exception, in cold water.

Taking, however, the class of scrophulous children at large, it may be asserted, that there is not a more fatal error than this, nor is there a more certain method of separating the infirm race of children, by death, from the healthy. Were it allowable to improve society and future generations, by encouraging such errors, I should not have dwelt so much on the subject; but the duty of a physician is not that of a legislator; he is called on to diminish and bring relief to individual cases of affliction and distress; and in the instance now alluded to, to save a progeny from a threatened disease, which is generally considered as hopeless. This can only be done by an opposite plan of physical education. A scrophulous child, in this country, must be brought up in such a manner, that it may be in the air several times a day, without risk from unexpected and sudden changes of temperature; and consequently should have rather too much, than too little clothing, and a full diet of wholesome food, especially animal food; for all scrophulous children, and all scrophulous people, without almost any exception, require a full diet, and agree with

it, except when labouring under some actual disease.

Of all stimulants, that arising from food, being the most permanent, is that which does them the most good. It is surely unnecessary to observe, that a due distinction is to be made between a full diet and excess of food. Indeed, as young people of this class have more appetite than powers of digestion, they require to be watched, lest they overload their stomachs. When great languor, drowsiness, oppression, and feverish heat, follow regularly every meal, it is then unquestionably either too abundant, or too stimulating, or both; but of two evils, this is less pernicious to scrophulous constitutions than a too scanty or very poor diet, such as I have seen the children of both sexes exposed to in various manufactories in this country, and, alas! in some distinguished seminaries of education abroad.

When a child of a strumous constitution, of a weakly and delicate make, whether born of healthy or of scrophulous parents, begins to lose his appetite, to be affected with languor, and that the features of his face become as it were pinched and diminished in size, the eyes heavy, and deprived of their usual lustre; scrophulous action is

generally going forward: or if it do not actually exist, the scrophulous disposition or character is rapidly forming.

In this case, the constitution is best relieved, 1st, by exciting the blood to the surface of the body, so as to diminish internal congestion; and, 2dly, by unloading the bowels, so as to allow the blood to circulate freely through the viscera of the abdomen, and this, at the same time, removes from the lacteals the mechanical pressure which costiveness or an accumulation of fæces produces. The daily use of an artificial salt water bath, at the temperature from 92 to 96 of Farenheit, and any of the preparations of antimony combined in various ways, according to circumstances, with certain mercurial preparations, such as the submuriate of mercury, the red sulphuret of the same, along with such stimulants as produce a permanently increased action of the vessels of the skin, and in general of all the extreme vessels; such as sarsaparilla, aruica montana, together with the alcalies, are the best means for correcting scrophulous action in the beginning.—*See Formulæ*, 1, 2, 3, 4, 5, 6, 7, 8. These medicines, if persisted in, along with the tepid salt water bath, and due clothing, often correct a scrophu-

14.

℞ Decocti dulcamaræ, ʒij.—℥ss.
Decoct. sarsaparillæ, ʒv.—℥iss.
Ext. hyoscyam. gr. ss—gr. iss.
Sacchar. purificat. ʒj. m.

15.

℞ Decocti sarsaparillæ, ʒx.
Decoct. dulcamaræ, ʒij.
Liq. calcis muriat. ʒss.
Tinct. opii, gr. iv.—gr. x. ter quotidie.

Remarks. The solanum dulcamara may be given in much larger quantities than is here specified, and, where it agrees with the stomach and nervous system of the patient, is an useful auxiliary in a variety of scrophulous affections, especially scrophulous eruptions. In the few cases of chronic tubercular phthisis in which I have given it, it appeared to me to increase the powers of the sarsaparilla; but as I never have trusted to either the one or the other of these medicines alone in consumption, or even to their combined influence, without adding at the same time either antimonials, muriate of lime, opium, or other narcotics, it is therefore impossible to say what specific power was due to any one ingredient. Professor Richter, of Gottingen, whose medical learning, and whose talents for practice, both in medicine and surgery, were of the very first class, speaking of dulcamara, says, "I have employed the dulcamara in phthisis "pituitosa with quite extraordinary success. I remember "at least eight cases in which the patients laboured under "colliquative sweat, hectic fever, and a purulent expectoration, all of whom were completely restored to health by

"the dulcamara and Iceland moss combined." (*Richter's Med. Chirurg. Bibliothek. B.* 11, *p.* 283.) Sagar, in his Systema Morborum, asserts that the dulcamara is the most efficacious of all remedies in consumption; and Carrère, who has written the most largely of all authors on the virtues of this drug, attributes considerable powers to it, especially in that variety of chronic bronchitis which he denominates the pituitous asthma.

Although there are few medicines concerning which more has been said or written than the dulcamara, yet it may be safely asserted that its specific virtues are very little known. It has suffered from having been prematurely praised and overpraised. The best preparation of it is as yet unknown; and when it is considered how very different the extract is, both in quantity and sensible qualities, accordingly as it is made with alcohol or water, and that the action of these on the stomach and nervous system is by no means similar, it proves that much remains to be discovered concerning its medical virtues.

16.

℞ Pulv. fol. aconiti, ʒj.
Hydrarg. sulphuret. rubri, gr. x.
Conserv. rosæ caninæ, q. s. ft. massa, r. in pilulas xxx dividenda.

Dose.—From one to six, to be taken thrice a day, both in acute and chronic tubercular phthisis.

17.

℞ Potassæ nitratis, gr. xij.
Magnes. sulphat. ʒss.—ʒj.
Succi limonum, ʒij.
Decoct. hordei comp. ʒx. m.

This quantity to be taken every two or three hours.—See chapter on Hæmoptysis.

18.

℞ Potassæ nitrat. ʒij.
Sodæ tartarizat. ʒiij.
Succi limonum, ℥ss.
Decocti hordei comp. ℔iss.
Dose.—℥ij. every two hours.

19.

℞ Potassæ supertartrat. ʒss.
———— nitrat. gr. vi.
Magnes. sulphat. ʒj m.
To be taken in a cupful of barley-water every three hours.

Remarks. As long as any considerable febrile heat, quickness, and hardness of pulse is present in hæmoptysis, such cooling aperients, as are presented in the three preceding formulæ, will be found to be more beneficial than the acidulated infusion of rose leaves, which is commonly given in such cases. They are not only more efficacious in putting a stop to the hæmorrhagy, but in preventing the inflammation which but too commonly follows the injury which has taken place. But when the febrile heat and quickness of pulse are subdued, such cooling purges, if too long continued, are very apt to bring on too much atony in the stomach and intestines, giving birth to cramp, colic, and flatulency.

20.

℞ Pulv. ipecacuanhæ comp. gr. iv.—gr. vj.
Sodæ tartarizat. ʒj.
Decoct. althææ, ℥iss.
Succi limonum, ʒss. m. ft. haustus, 4ᵗⁱ vel 6ᵗⁱ quâque horâ sumendus.

21.

℞ Pulv. ipecacuan. comp. gr. iv.
Potassæ nitrat. ℈ j.
Decoct. hordei, ℥iss. m. ft. haustus, 4ta vel 6ta quâque horâ sumendus.

22.

℞ Decocti lichenis, ℥x.
———— senegæ, ℥ij.—℥ss.
Sacchar purific. ℥j. m. ft. haustus, 4ta quâque horâ sumendus.

23.

℞ Plumbi superacetat.
Opii puri pulverizati, āā gr. ij.
Micæ panis, ℈j.
Conserv. rosæ, q. s.
ft. massa, in pilulas, No. vi. dividenda quarum una ter quotidie sumatur.

24.

℞ Ext. myrrhæ aquos. ℨj.
Zinci. sulphat. gr. ij.—gr. vj.
Syr. q. s. divide in pilulas. No. xij. quarum una 6ta quâque horâ sumatur.

25.

℞ Plumbi superacetat. gr. iij.
Opii puri, gr. iss.
Ext. glycyrrhiz. gr. xij. syr. q. s.
divide in pilul. No. vj. quarum una ter quotidie sumatur.

26.

℞ Balsam copaibæ, ʒss—j.
——— Peruvian. gr. x.
Mucilag. acaciæ, ʒj.
Misturæ amygdal. ℥xi. m.
Tinct. opii, gr. x. ft. haustus mane et vespere sumendus.

27.

Shaller's Remedy: see page 203.

℞ Cort. quercûs.
—— cinchonæ, āā ℥j.
Aquæ ℔iij. decoque ad ℔iss cola; et adde
Ferri sulphat. gr. viij.
Syr. cort. aurant. ℥j.

Dose.—℥ j every two hours.

28.

℞ Balsam. copaibæ, ʒij.
——— tolutan. ʒiss.
Mucilag. acaciæ, ℥ss.
Mellis opt. ℥ij.
Tinct. opii, ʒj.
Syr. tolutan. q. s.

Dose.—A teaspoonful morning, noon, and evening.

Remark. This medicine I have found an useful auxiliary with the tar vapour in the laryngeal phthisis.

THE END.

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ERRATA.

Page	Line
22,	16, *for* cureable, *read* curable.
24,	6, *for* laryngeal, *read* laryngea.
41,	last line, *for* copaibi, *read* copaibæ.
83,	23, *for* hepatites, *read* hepatitis.
87,	8, *for* sthenoscope, *read* stethoscope.
96,	13, *for* left, *read* right.
98,	5, *for* vomica, *read* vomicæ.
104,	lines 8 and 9, *dele* tartar emetic ointment.
107,	line 22, *for* Wrendaergh, *read* Wundaerzte.
115,	3d line of the note, *for* tartarisate, *read* tartarizati.
117,	10, *for* laryngia, *read* laryngea.
119,	20, *for* Dr. Browne, *read* Dr. Bourne.
126,	24, *for* hepatites, *read* hepatitis.
127,	8, *for* hepatites, *read* hepatitis.
128,	4, *for* stipet, *read* stipit.
136,	9, *for* frosty, *read* frothy.
185,	21, *for* sthenoscope, *read* stethoscope.


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